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ACQUIRE INVALUABLE SKILLS AND HANDS-ON EXPERIENCES ON REAL COMPANY PROJECTS

PROGRAMME HIGHLIGHTS

- Acquire Data/ Digital and other work-ready skills
- Gain industry exposure and networks
- Obtain project guidance and mentorship
- Work remotely as a team to solve authentic industry projects

LEARNING JOURNEY

1. Register as an Individual or Team
2. Work on Authentic Projects *(6-8 weeks)*
3. Complete LinkedIn Learning Courses
4. Supported by Company Mentors
5. Project Submission and Sharing
6. Evaluation and Certificates

LIST OF PARTNERS' PROJECT

ADVISORS COLLECTIVE

- Building a Smart Dashboard and Insights Engine for Business Priorities Assessment — Details >>

AIRBUS SINGAPORE

- HR Data Automation — Details >>

ANGSANA LABS

- Automation Project to Generate Faster and Error-Free Reporting from Lab Data — Details >>

AQSOLOTL

- Modular Clock Distribution Network for Quantum Control System — Details >>

BHG RETAIL REIT

- Enhancing BHG Retail REIT's Digital Branding and Investor Outreach — Details >>

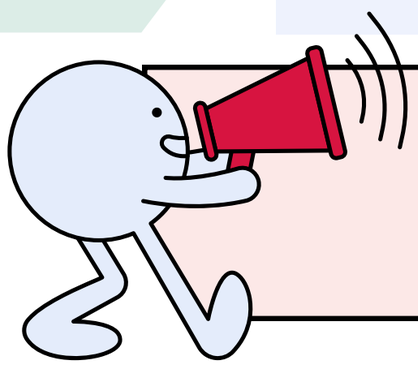
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANKS

- Track Data Flow: Build a Tool to Trace how Data Moves and Changes — Details >>

FLINT LABS

- Building a 3D Camera Facial Recognition System for Smart, Secure Door Access Control — Details >>

1 of 3 | View more projects >>



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Deadline 24 Aug, 2359hrs

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LIST OF PARTNERS' PROJECT

FUGRO SINGAPORE MARINE

- AI-Driven Laboratory Test Scheduler with Forecast and Load Balancing — Details >>
- AI Image Recognition Tool for Soil Type Classification

GETSOLAR

- Optimizing Solar Calculator Rooftop Tracing User Experience — Details >>

INSTITUTE OF SUSTAINABILITY FOR CHEMICALS, ENERGY AND ENVIRONMENT (ISCE^2), A*STAR

- Process Improvement and Automation for Coordinating External Visitors — Details >>

KAVEMAN

- Exploring AI Integration in Real-World Media Production: A Kaveman Workflow Testbed — Details >>

MISUMI.AI

- AI-Powered Regional Used Automotive Import Platform for the ASEAN Market – Data & Cloud Innovation — Details >>

PANASONIC FACTORY SOLUTIONS

- Advanced Analytics Module for Auto Generating Insights on Industrial Machine Data — Details >>

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LIST OF PARTNERS' PROJECT

ROBERT BOSCH

- Data Model Proposals for Modelling of Processing of Food in Appliances — Details >>
- GenAI Application for HVAC (Heating, Ventilation and Air Conditioning)

SO DRAMA! ENTERTAINMENT

- Lifestyle Content Consumption of Gen-Zs in Singapore — Details >>

TAN TOCK SENG HOSPITAL

- Eye Can Route — Details >>

YOU TIAO MAN

- AI-Driven Social Media Trend Analysis & Content Strategy — Details >>

3 of 3 | << View more projects

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Supporting Partner

Advisors Collective

Building a Smart Dashboard and Insights Engine for Business Priorities Assessment

PROBLEM STATEMENT

This project offers students the opportunity to co-create an automated insights platform that supports strategic decision-making for SMEs in Singapore and beyond. The platform will enhance the use of AC's existing Business Priorities Assessment, which evaluates nine key areas of business and leadership. The goal is to automate data collection and analysis across over 150 businesses, enabling insights at the individual, organisational, and population levels. This will allow for leadership reflection, internal alignment, and broader trend analysis, ultimately helping SMEs prepare for future growth.

TASKS

- Achieve the target number of responses (not limited to Singapore, we prefer a diverse set of responses – AC will help identify, connect respondents but student team is also encouraged to source responses on their own
- Develop individual client-facing report process
- Develop individual client-facing dashboard process
- Develop team alignment report process
- Develop team alignment dashboard process
- Develop company (vs selected benchmarks) report process
- Develop company (vs selected benchmarks) dashboard process

DELIVERABLES

- A playbook outlining the processes, automation of the required reports and dashboards.
- Students' reflection of the journey with Advisors Collective.

REQUIREMENTS

- Interest in conducting research, data analytics, data visualization, data storytelling (converting data into actionable insights, presentation skills, basic UI/UX or dashboard design (eg. Power BI, Tableau, or similar)
- Some digital knowledge (RPA, coding) would be good to have

INDUSTRY SKILLS DEVELOPED

- Conducting primary research (research skills)
- Automating reporting of data and developing visualization tools (digital skills)
- Presentation skills
- Soft skills (handling objection, building trust, relationships)
- Understanding how to build a new business and sector

TIMELINE

SEP — NOV 2025

- **Week 1:** Onboarding – understanding AC and the Business Priorities Assessment
- **Week 2:** Getting responses, develop single leader report and dashboard
- **Week 3:** Getting responses
- **Week 4:** Getting responses, develop company alignment report and dashboard
- **Week 5:** Getting responses
- **Week 6:** Getting responses, develop benchmarking report and dashboard

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Supporting Partner

AIRBUS

HR Data Automation

PROBLEM STATEMENT

Our HR systems lack automation and integration, leading to manual efforts and disparate data sources for critical HR reports. This hinders our ability to obtain timely, accurate, and holistic insights into areas like diversity metrics and recruitment analytics. Consequently, strategic decision-making is impacted by incomplete data, limiting proactive improvement and KPI tracking.

TASKS

- Analyze Current HR Data Landscape & Reporting Gaps
- Research & Recommend Integrated Data Solutions
- Design Proposed Reporting Framework & Dashboards
- Present Findings, Outline Considerations

DELIVERABLES

- One presentation with recommendation at the end of the project

INDUSTRY SKILLS DEVELOPED

- Analytical & Strategic Thinking
- Research & Problem-Solving
- Communication & Professional Presentation

REQUIREMENTS

- Problem solving
- Data analytics
- Dashboarding
- Good to have a brief understanding of how HR works

TIMELINE

SEP – NOV 2025

- **Week 1:** Problem Definition & Scope Alignment
- **Week 2:** Deep Dive into Current State & Gap Analysis
- **Week 3:** Solution Research & Technology Exploration
- **Week 4:** Begin To Develop Recommendation(s)
- **Week 5:** Continue To Fine-tune Recommendation(s)
- **Week 6:** Final Presentation

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Supporting Partner

angsana Molecular & Diagnostics

Automation Project to Generate Faster and Error-Free Reporting from Lab Data

PROBLEM STATEMENT

Our laboratory generates data from various instruments (e.g., gene sequencers and analyzers etc.). Currently, lab technicians manually transcribe this data into predefined Excel-based lab reports, which is time-consuming, error-prone, and inefficient.

TASKS

- Capture raw data output from lab instruments (e.g., CSV, TXT, PDF or instrument-specific formats)
- Transform and map the data into the predefined Excel report template
- Ensure proper formatting (units, decimal places, headers, etc.)
- Include basic validation checks (e.g., out-of-range values flagged)

The solution should be user-friendly for lab staff with minimal IT expertise and requires minimal intervention from lab staff.

DELIVERABLES

- A software tool that does the data transcription automatically which the lab can use.
- Software to be tested and validated for accurate transcription.
- A presentation and “training session” to explain to lab staff how to use the tool eg. User Guide.

INDUSTRY SKILLS DEVELOPED

- Programming and Scripting
- Data Processing and Transformation
- Automation and workflow Optimisation
- Designing User-friendly Tools for Non-technical Users

REQUIREMENTS

- Programming (Python, VBA, or similar)
- Experience with Excel Macros/ Templates
- Data parsing/ Transformation
- UI/UX
- Data Analysis Skills

TIMELINE

SEP – NOV 2025

- **Week 1:** Understanding Business and Data Gathering
- **Week 2:** Data Gathering
- **Week 3 - 5:** Prototype Development
- **Week 6:** Prototype Development/ Validation and Refinement
- **Week 7:** Validation and Refinement
- **Week 8:** Deployment and Documentation/ Final Presentation

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Supporting Partner

AQSolotl

Modular Clock Distribution Network for Quantum Control System

PROBLEM STATEMENT

Quantum system are growing in size with strict requirement on synchronicity requiring modular precise clock distribution solution.

TASKS

- Design a datacentre compatible clock generation and distribution system for demanding control system.

DELIVERABLES

- Presentation of existing clock distribution
- Product solution ready for PoC (Selected part with reasoning, modularity solution with known limitations, Physical solution supporting the proposed solution)

REQUIREMENTS

- Electrical Engineering (1 Digital, 1 Analogue)
- 3D Modelling
- Critical Thinking

INDUSTRY SKILLS DEVELOPED

- Electrical Engineering
- 3D Modeling

TIMELINE

SEP — NOV 2025

- **Week 1:** Understanding of solutions constraint / visit Quantum lab / insight on quantum computing
- **Week 2:** Literature review of existing solution
- **Week 3:** Make expected technical specification of solution (EE) / cater part preselections
- **Week 4:** Price study, look into the pricing and the availability of part at low and then medium volumes
- **Week 5:** Design and propose 2 modularity physical approach
- **Week 6:** Make 3D model of selected solution and insure full fitting
- **Week 7-8:** Lab Bench testing with available parts and parts ordered earlier in the project to validate designed solution

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Supporting Partner

BHG MALL REIT

Enhancing BHG Retail REIT's Digital Branding and Investor Outreach

PROBLEM STATEMENT

BHG Retail REIT faces the challenge of limited visibility and engagement with potential investors, especially with retail investors, on digital platforms such as LinkedIn as well as B2B platforms like corporate webinars. The current branding and content strategy lacks consistency and resonance with target audiences.

TASKS

- Understand BHG Retail REIT's current branding, digital presence, and investor relations approach.
- Research peer REITs and financial institutions for benchmarking digital branding and outreach strategies.
- Define target audience personas and brand positioning.
- Propose relevant content pillars to guide future digital communication.
- Plan and develop LinkedIn content (e.g. posts, visuals, infographics, investor education snippets).
- Compile a list of potential financial media, brokers, and fintech platforms for investor education webinars and partnerships.
- Present a consolidated digital branding playbook and outreach roadmap.

INDUSTRY SKILLS DEVELOPED

- Brand strategy and digital marketing in the financial/investment sector
- Content creation for professional and investor audiences
- Market and competitor research techniques
- Stakeholder engagement and corporate communication
- LinkedIn content planning
- B2B marketing strategies
- Understanding of the REIT and financial services landscape
- Project management and client presentation

DELIVERABLES

- **LinkedIn Content Calendar**: 12-week content calendar with min. 4 LinkedIn posts.
- **Investor Outreach List**: Shortlist of financial media, brokers, and firms with contact suggestions
- **Final Presentation to CEO**: Strategic recommendations to BHG REIT mentoring panel - Competitor research insights, audience personas, brand positioning, and content pillars

REQUIREMENTS

- Interest or background in marketing, business, or communications
- Familiarity with LinkedIn and social media platforms
- Strong written communication skills
- Proactive attitude and creativity in content ideation
- Research and analytical capabilities
- Professionalism when working with real-world clients
- Basic knowledge or interest in finance, REITs, or investment topics is a plus

TIMELINE

SEP — NOV 2025

- **Week 1:** Kick-off with mentor. Review project brief, roles, and BHG REIT's digital presence.
- **Week 2:** Competitor/ peer research. Start brand audit and stakeholder interviews.
- **Week 3:** Define audience personas and digital brand. Draft content pillars and tone of voice.
- **Week 4:** Present interim findings and draft strategy. Ideate LinkedIn content.
- **Week 5:** Create content calendar and sample content. Revise based on mentor feedback.
- **Week 6:** Research potential brokers, financial influencers, and webinar partners.
- **Week 7:** Consolidate findings into branding brief and outreach plan. Prepare final presentation.
- **Week 8:** Present to mentor and client. Submit deliverables and reflect on learning.

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Supporting Partner

CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK

Track Data Flow: Build a Tool to Trace how Data Moves and Changes

PROBLEM STATEMENT

In many organizations, it's difficult to trace how data flows through different systems – where it comes from, how it gets transformed, and where it ends up. Without this visibility, errors are hard to debug, reports can't be trusted, and audits become time--consuming. This project aims to solve that problem by building a simple, program that helps teams track the movement and transformation of data across files or processes, making data workflows easier to understand, maintain and trust.

TASKS

- **Phase 1:** Learn Extract, Transform, Load (ETL) and data lineage concepts; familiarise with tools, pipeline, and data structure
- **Phase 2:** Build a mock ETL pipeline with data transformation and metadata logging
- **Phase 3:** Implement lineage tracking across ETL steps, including column-level changes
- **Phase 4:** Ensure lineage tracker is reusable across different scripts and datasets
- **Phase 5:** Visualise data lineage using Mermaid.js or Streamlit, with tagging and glossaries
- **Phase 6:** Test with new datasets; document findings and deliver final report, code, and demo

DELIVERABLES

- Program executing an ETL pipeline with mock dataset
- Metadata logger that tracks lineage in JSON/CSV
- Sample lineage logs from at least two pipelines
- Visual lineage diagram (Mermaid.js or static graph)
- Glossary of fields and transformation steps
- Project Repository, README and user guide for tool usage

INDUSTRY SKILLS DEVELOPED

- Metadata modeling and design for data traceability
- End-to-end data lineage tracking for audit and governance
- Pipeline observability and documentation practices
- Lightweight ETL development and data flow visualization
- Tooling integration using and JSON/YAML standards

REQUIREMENTS

- Basic Programming and scripting (e.g. Python, pyspark, Java)
- Understanding of CSV data formats and file handling
- Familiarity with data pipelines or ETL concepts
- Interest in data transparency, governance, or observability
- Willingness to learn new tooling (e.g., Mermaid.js, Streamlit)

TIMELINE

SEP – NOV 2025

- **Week 1:** Research data lineage and get familiar with tools and use case
- **Week 2:** Build mock dataset and basic ETL transformation script
- **Week 3:** Implement metadata logging function
- **Week 4:** Capture lineage metadata across multiple pipeline steps
- **Week 5:** Implement lineage parser and prepare for visualization
- **Week 6:** Build visual flow (diagram or Streamlit UI)
- **Week 7:** Add glossary/tags and validate with new pipeline
- **Week 8:** Finalise report and deliver project presentation/demo

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Supporting Partner

Flint Labs

Building a 3D Camera Facial Recognition System for Smart, Secure Door Access Control

PROBLEM STATEMENT

As workplaces and facilities grow more connected and security-conscious, traditional methods like keycards and PIN codes are becoming outdated and vulnerable to theft or misuse. Flint is developing a cutting-edge 3D camera-based facial recognition access control system to create smarter, safer entry points—no cards, no contact, just your face.

This project aims to design and build a secure and reliable system that can scan faces in real-time, recognize authorized personnel accurately, and grant or deny access to physical doors based on pre-set permissions.

TASKS

- **Hardware Setup**: Assist in configuring and testing 3D camera hardware to enable accurate, real-time facial scanning at access points.
- **Facial Recognition Software**: Support the development of AI-driven software with 3D feature mapping to enhance recognition accuracy and prevent spoofing.
- **Access Control Logic**: Help create rule-based logic that links individual users to specific access rights based on their assigned roles or door locations.
- **Admin Dashboard**: Collaborate in building a user-friendly interface for enrolling users, assigning access levels, and viewing entry logs.
- **Door Lock Integration**: Participate in integrating the system with electromagnetic or smart locks for physical access control.
- **Security Protocols**: Contribute to designing basic encryption and system integrity measures to keep access data secure.

DELIVERABLES

- Prototype of 3D facial recognition access system (hardware + software)
- Technical Report on system design, model, integration, and security
- User Manual for admin dashboard and access features
- Final Presentation of prototype, outcomes, and learnings
- Handover Package with source code, documentation, and deployment guide

INDUSTRY SKILLS DEVELOPED

- Computer Vision & AI Development
- IoT Hardware Integration & Embedded Systems
- Cybersecurity & Data Encryption

REQUIREMENTS

- EEE/ CS background with basic knowledge of computer vision, ML, or embedded systems.
- Familiarity with Python, C++, and tools such as OpenCV, TensorFlow, or ROS is a plus
- Interest in cybersecurity, hardware integration, or UI design
- Strong problem-solving skills, attention to detail, and the ability to work independently or in small teams are preferred

TIMELINE

SEP — NOV 2025

- **Week 1:** Onboarding. Review project goals, system, and 3D facial recognition tech.
- **Week 2:** Set up and calibrate 3D camera. Test data capture and explore APIs/integration specs.
- **Week 3:** Support facial recognition dev with 3D mapping, spoof prevention, and model training.
- **Week 4:** Develop access control logic and integrate with door-based permissions. Test logic rules.
- **Week 5:** Help build admin dashboard, implement security features, and manage user roles/logs.
- **Week 6:** Support system testing, final report/presentation, and share improvement insights.

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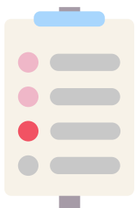
FUGRO

AI-Driven Laboratory Test Scheduler with Forecast and Load Balancing

PROBLEM STATEMENT

Managing daily test schedules across regional geotechnical labs is complex due to resource constraints, sequencing requirements and overlapping project timelines. Manual scheduling results in bottlenecks, poor equipment utilisation and risks of delay.



TASKS

- Build a smart scheduling tool that automates test allocation based on technician availability, equipment load and project deadlines
- Incorporate test sequencing logic
- Forecast test load from on-going and prospective projects
- Develop load balancing logic to shift work between regional labs based on capacity
- Visualise data using dashboards (Gantt chart, resource heatmap, scenario simulation)

DELIVERABLES

- Functional prototype of scheduling tool
- Final presentation to Fugro stakeholders
- Documentation report (code + usage manual)

INDUSTRY SKILLS DEVELOPED

- Data analytics and operations research
- Web dashboard development and workflow automation

REQUIREMENTS

- Background in data science, operations research or computer science
- Familiarity with Python, SQL or scheduling algorithms preferred
- Strong interest in solving real world engineering/logistics problems

TIMELINE

SEP — NOV 2025

- **Week 1:** Project kickoff, lab workflow overview and problem scoping
- **Week 2:** Requirements gathering, system design and data mapping
- **Week 3:** Develop test sequencing logic and dependency engine
- **Week 4:** Build base scheduling module with resource constraints
- **Week 5:** Add multi-project support and conflict detection features
- **Week 6:** Integrate proposal forecasting
- **Week 7:** Implement regional load balancing logic between labs
- **Week 8:** Develop dashboards and reports
- **Week 9:** User testing, feedback and refinement
- **Week 10:** Final demo, report submission and project handover

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Supporting Partner

FUGRO

AI Image Recognition Tool for Soil Type Classification

PROBLEM STATEMENT

Visual soil classification is often subjective and inconsistent, especially across technicians with varying experience. This project aims to build an AI-powered tool that recognizes soil types from images and supports lab technicians with classification and logging. The tool will improve consistency, speed, and standardization across regional labs.

TASKS

- Collect and organize real-world images of soil samples (can be provided by us)
- Label and prepare training datasets based on classification codes (e.g., clay, silt, sand)
- Develop a convolutional neural network (CNN) model for image-based classification
- Build a user-friendly interface to upload photos and display predictions
- Compare AI outputs with technician assessments and fine-tune the model
- Explore integration options into lab data systems

DELIVERABLES

- Image classification model with a labeled training dataset
- Working interface (web/app) for image input and result display
- Final presentation to Fugro stakeholders
- Technical report covering methodology, model accuracy, and recommendations

INDUSTRY SKILLS DEVELOPED

- Machine learning and image processing (computer vision)
- Full-stack prototyping and geotechnical domain adaptation

REQUIREMENTS

- Background in geotechnical engineering, computer vision, machine learning or data science
- Interest in applying AI to engineering or environmental applications

TIMELINE

SEP — NOV 2025

- **Week 1:** Kickoff, project brief, review soil classification methods and datasets
- **Week 2:** Gather images, structure dataset, label samples
- **Week 3:** Build baseline CNN and assess accuracy
- **Week 4:** Expand dataset, apply augmentation, improve model
- **Week 5:** Evaluate against technician clasifications and refine labels
- **Week 6:** Build web/app interface to upload image and show predictions
- **Week 7:** Test model across varied soil types and lighting conditions
- **Week 8:** Improve UI/UX and fine-tune model
- **Week 9:** Finalise results and documentation
- **Week 10:** Present, code handover, and wrap up

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GetSolar

Optimizing Solar Calculator Rooftop Tracing User Experience

PROBLEM STATEMENT

Our solar calculator application experiences significant user drop-off rates during the rooftop tracing process on our Google Maps integration. Users abandon the application when attempting to outline their roof area, which is a critical step for accurate solar panel calculations and quotes. This friction point prevents potential customers from completing their solar assessment and impacts our conversion rates.

TASKS

- Conduct user experience research to identify specific pain points in the rooftop tracing process
- Analyze current user flow and interaction patterns using analytics and user testing
- Design and prototype improved user interface solutions for the Google Maps integration
- Develop and implement optimized rooftop tracing functionality
- Test solutions with real users and measure improvement in completion rates
- Create documentation and recommendations for ongoing UX optimization

DELIVERABLES

- 1 redesigned user interface prototype with improved rooftop tracing flow
- 1 functional web application implementation with optimized Google Maps integration
- 1 final presentation showcasing results and performance improvements

INDUSTRY SKILLS DEVELOPED

- User Experience (UX) Research and Design
- Web Development and API Integration
- Data Analytics and User Behavior Analysis

REQUIREMENTS

- Preferred course of study: Computer Science, Information Systems, Design, or related fields
- Technical skills: Basic web development knowledge (HTML, CSS, JavaScript)
- Design skills: Interest in UX/UI design and user research methodologies
- Analytical mindset: Ability to analyze user data and metrics
- Communication skills: Ability to present findings and recommendations clearly

TIMELINE

SEP — NOV 2025

- **Week 1:** Project onboarding, current system analysis, and initial user research planning
- **Week 2:** User research execution - interviews, surveys, and current user flow analysis
- **Week 3:** Data analysis, pain point identification, and competitive research
- **Week 4:** Design ideation, wireframing, and prototype development
- **Week 5:** Prototype refinement and initial user testing of new solutions
- **Week 6:** Development implementation of optimized rooftop tracing interface
- **Week 7:** Final testing, performance measurement, and iteration based on results
- **Week 8:** Final documentation, presentation preparation, and project handover

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Supporting Partner

Institute of Sustainability for Chemicals, Energy and Environment
A*STAR ISCE²

Process Improvement and Automation for Coordinating External Visitors

PROBLEM STATEMENT

ISCE² receives many external visitors on a weekly basis. Currently, arranging such visits require manual email coordination among multiple stakeholders. This leads to inefficiencies, delays, and increased administrative burden.

TASKS

Conduct a review of the current visitor coordination workflow and propose a simplified and streamlined process. Process automation using tools such as Microsoft Power Automate should also be considered to reduce manual activities involved such as:

- Application of Jurong Island passes
- Inform security guards
- Booking of meeting rooms
- Preparation of lab coats from Lab and Facilities Management Division
- Coordinating with lab officer for lab visits
- Informing safety officers

DELIVERABLES

- Proposal for process improvement
- Power Automate flow or similar
- One presentation
- One report

INDUSTRY SKILLS DEVELOPED

- Process Automation
- Solution Architecture
- Critical Thinking

REQUIREMENTS

- Process automation tools (Power Automate preferred)
- Critical thinking

TIMELINE

SEP — NOV 2025

- **Week 1:** Understanding the problem and current workflow
- **Week 2:** Design and propose solution
- **Week 3:** Feasibility discussion and refinement of solution
- **Week 4:** Develop automated workflow
- **Week 5:** Demonstrate automated workflow
- **Week 6:** Presentation and report

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Supporting Partner

KAVEMAN

Exploring AI Integration in Real-World Media Production: A Kaveman Workflow Testbed

PROBLEM STATEMENT

AI tools are rapidly evolving, but their role in professional media production remains uncertain. Kaveman, as a working production house, wants to evaluate how AI can meaningfully augment or transform our workflow, without compromising creative quality or client standards. This project will use real mini-briefs from Kaveman's active work as case studies, running in parallel with traditional production for comparison.

TASKS

- Analyze Kaveman's current workflow and identify integration points for AI tools
- Use real client mini-briefs (provided by Kaveman) to prototype content using AI tools.
- Compare results with traditional production to evaluate effectiveness, feasibility, and trade-offs
- Document insights, friction points, and tool effectiveness in a final AI Integration Blueprint

DELIVERABLES

- 2–3 AI-assisted content prototypes based on real briefs (video, visual + copy)
- Comparative deck showing traditional vs. AI-augmented output
- Workflow Integration Map + AI Tools Effectiveness Report
- Final AI Integration Blueprint for Kaveman

INDUSTRY SKILLS DEVELOPED

- Real-world generative AI application in media production
- Workflow design, tool evaluation, and production innovation

TIMELINE

SEP — NOV 2025

- **Week 1:** Briefing, brand immersion, past project review
- **Week 2:** Workflow mapping and tool planning
- **Week 3–4:** Content experimentation + production
- **Week 5:** Analysis, polish, documentation
- **Week 6:** Presentation of findings and final showcase

REQUIREMENTS

- Interest in production, media innovation or digital content
- Eagerness to explore and apply AI tools creatively
- Comfort with open-ended challenges and real feedback from a production company

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Supporting Partner

MISUMI.AI

AI-Powered Regional Used Automotive Import Platform for the ASEAN Market – Data & Cloud Innovation

PROBLEM STATEMENT

MISUMI.AI (PRIVATE) LIMITED, the tech arm of Misumi Kaizen OÜ Group, is launching a 12-month, five-phase project to digitalise its used car import operations across four ASEAN countries (Malaysia, Indonesia, Thailand, Singapore). The goal is to replace labour-intensive, semi-manual workflows with a cloud-native, AI-driven platform powered by LLMs, computer vision, and advanced analytics. This platform will streamline sourcing, evaluation, and import processes for cars from Japan, Australia, and the UK, improving data accuracy, cutting costs, and unlocking new revenue. It addresses current pain points such as fragmented marketplaces, inconsistent condition reports, and complex tax rules, while also supporting government agencies with better data for compliance checks. The project will adopt the PRINCE2 Agile methodology,combining the governance of PRINCE2 with sprint-based delivery.

TASKS

Platform Foundation & AI Framework:

- Set up secure user registration with two-factor authentication (2FA)
- Implement token-based payments (PayNow, DuitNow, QRIS, Thai QR, Alipay)
- Integrate a multi-model AZI layer (OpenAI, DeepSeek R1, Perplexity Enterprise, Google Gemini, AWS Bedrock)
- Establish core platform foundation to support scalable, intelligent services

DELIVERABLES

- Working software increment
- Technical documentation, test plans and user guides.
- Final report and live demonstration to MISUMI.AI stakeholders.
- Contribution of cleaned datasets to the central analytics repository.

INDUSTRY SKILLS DEVELOPED

- End-to-end AI/ML deployment in production
- Cloud-native engineering and DevOps (Kubernetes, CI/CD).
- Computer vision for automotive inspection.
- Complex tax and fee algorithm design.
- Agile project management with PRINCE2 Agile.
- Cross-border regulatory compliance.

REQUIREMENTS

- Background in Computer Science, Information Systems, Data Science, Mechanical or Electrical Engineering.
- Proficiency in Python or JavaScript; familiarity with cloud platforms and APIs.
- Interest in AI, automotive systems, and data analytics.
- Strong collaboration and problem-solving skills.

TIMELINE

SEP — NOV 2025

- **Week 1:** Project phase onboarding & architecture
- **Week 2:** Cloud setup
- **Week 3:** Auth system
- **Week 4:** Payment gateway
- **Week 5:** LLM integration
- **Week 6:** Model evaluation
- **Week 7:** Testing
- **Week 8:** Demo & handover

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Supporting Partner

Panasonic CONNECT

Advanced Analytics Module for Auto Generating Insights on Industrial Machine Data

PROBLEM STATEMENT

The current application software for Panasonic Factory Solutions Asia Pacific Pte. Ltd. (PFSAP) Company's industrial machines can extract data and generate basic reports. However, customers require enhanced insights and real-time alerts based on machine data trends to take quick action and improve performance. Addressing this need is essential for increasing customer satisfaction and operational efficiency.

TASKS

- Study and Understand about Machine Critical Data & Errors
- Feasibility study on using LLM's or Machine Learning or Business Intelligence Tools
- Develop System Design and a Prototype of the Advanced Analytics Module
- Insights/Alerts from module to be notified or visualized in a smart phone

DELIVERABLES

- A demonstration of the Advanced Analytics Prototype Module developed to automatically generate insights from existing machine data.

INDUSTRY SKILLS DEVELOPED

- Hands on Software Prototype development for Industrial Machines
- AI Application in Manufacturing

REQUIREMENTS

- Experience in Coding to develop prototype module
- Exposure to LLM's and able to simple Build RAG, AI Agents
- Data Analysis skills to understand about machine data and useful insights

TIMELINE

SEP – OCT 2025

- **Week 1:** Planning and Design
- **Week 2:** Feasibility Study and Data Preparation
- **Week 3:** Model Selection and Initial Development
- **Week 4:** Integration of Retrieval and Generation
- **Week 5:** Testing and Iteration
- **Week 6:** Finalization, Demonstration and Presentation

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BOSCH

Data Model Proposals for Modelling of Processing of Food in Appliances

PROBLEM STATEMENT

The company is currently investigating new methods to effectively utilize non-personal data collected from its products in the area of home appliances. There is a need to explore methods to model this user data, some in user preferences and others in prediction and analysis. Harnessing this data would lead to improved insights, product enhancement, and overall business optimization.

TASKS

- Research and analyse existing data collected by the company's products.
- Explore packages and learning algorithms suitable for non-personal data utilization.
- Collate and propose established methods as baselines for target use cases in mind.
- Explore data fusion methods to improve prediction outcomes
- Collaborate with a team of problem solvers and a mentor throughout the project duration.
- Present findings and recommendations to the company at the end of the project.

INDUSTRY SKILLS DEVELOPED

- Data Mining and Analysis
- Algorithm Development and Machine Learning

REQUIREMENTS

- Proficiency in data analysis tools and techniques, with a focus on Python.
- Ability to manipulate and interpret data sets, extract meaningful insights, and visualize findings.
- Interested in research, including literature reviews on recommender systems and reinforcement learning
- Curious and proactive in exploring innovative data solutions
- Background in Computer Science, Data Science, Machine Learning, or related fields (including those related to food modelling)
- Experience in ML, data mining, or algorithms is a plus but not required

DELIVERABLES

- A report detailing the analysis methods for processing the non-personal data, the most effective methods isolated and thought process.
- Code examples implementing the selected algorithms for data utilization.
- A final presentation summarizing the findings, methodology, and recommendations./ report, at end of the project.

TIMELINE

SEP – OCT 2025

- **Week 1:** Introduction, data explanation, desk research
- **Week 2:** Initial testing, implementation
- **Week 3:** Further testing, implementation
- **Week 4:** Mid term pulse check, progress assessment
- **Week 5:** Testing, validation and implementation
- **Week 6:** Final presentation

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BOSCH

GenAI Application for HVAC (Heating, Ventilation and Air Conditioning)

PROBLEM STATEMENT

Generative AI (GenAI) is creating new opportunities for the HVAC industry. To stay ahead, there is a need to monitor and conduct a scouting study on how GenAI is being applied in both academia and industry. This internship will focus on identifying existing ideas, concepts, and solutions, as well as analyzing emerging trends in both academia and industry field. The goal is to build a clear picture of how GenAI can support innovation in HVAC.

TASKS

- **Literature Review** – Search and summarize academic papers, conference proceedings, and patents related to GenAI applications in HVAC
- **Industry Research** – Identify and review GenAI-related solutions, products, startups, and initiatives in the HVAC industry.
- **Trend Analysis** – Analyze and report on emerging trends, use cases, and technologies combining GenAI and HVAC.
- **Presentation & Insights** – Deliver a concise report and presentation summarizing key insights and future opportunities.

DELIVERABLES

- Presentation report summarizing key insights and future opportunities.

INDUSTRY SKILLS DEVELOPED

- AI Application Scouting
- Cross-Domain AI Integration
- Data-Driven Research & Analysis
- Technical Insight Communication
- AI Innovation Landscape Awareness

REQUIREMENTS

- Background in engineering (such as Electrical and electronics engineering, thermal engineering), AI or Data Science – Familiarity with generative AI concepts is preferred.
- Strong Interest in Research and Analytical tasks – Ability to search, read, and synthesize information from academic papers, patents, and industry sources.
- Good Communication and Documentation Skills – Capable of organizing findings into clear reports and presenting insights effectively.

TIMELINE

SEP — NOV 2025

- **Week 1:** Familiarise with HVAC fundamentals and GenAI concepts to set the research scope.
- **Week 2:** Conduct a comprehensive literature review on GenAI applications in HVAC.
- **Week 3:** Investigate current industry products and startups applying GenAI in HVAC solutions.
- **Week 4:** Organize and categorize research findings, highlighting key themes and gaps.
- **Week 5:** Analyze emerging trends and future opportunities for GenAI in the HVAC sector.
- **Week 6:** Compile research and analysis into a draft report and presentation.
- **Week 7:** Refine and improve the report and presentation based on feedback.
- **Week 8:** Present final findings and submit all deliverables.

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Supporting Partner

SO DRAMA ENTERTAINMENT

Lifestyle Content Consumption of Gen-Zs in Singapore

PROBLEM STATEMENT

Wonderwall.sg is a lifestyle platform celebrating Singapore through engaging content on food, people, places, and more. As Gen-Z content consumption habits evolve, the challenge lies in understanding what resonates with this diverse audience. This project aims to identify the lifestyle trends, content formats, and channels that best engage Gen-Zs, guiding future editorial direction and partnership strategies for Wonderwall.sg.

TASKS

Students will be tasked with investigating and optimizing Wonderwall.sg's appeal to Gen-Zs in Singapore through the following activities:

- **Gen-Z Lifestyle Content Mapping**: Analyse current Wonderwall.sg content and research trending topics among Singaporean Gen-Zs
- **Content Format & Channel Preferences**: Conduct surveys or interviews with Gen-Z users to collect qualitative insights into their preferences and motivations
- **Barriers and Motivators Analysis**: Analyse what drives or deters Gen-Z engagement, including trendjacking potential and key barriers to content consumption
- **Strategic Recommendations for Wonderwall.sg**: Provide strategic recommendations to enhance Gen-Z engagement and inform future content and platform strategies for Wonderwall.sg

DELIVERABLES

- Content and competitor analysis to identify Gen-Z engagement opportunities
- Design and run user research (surveys/interviews) to uncover Gen-Z content preferences
- Develop 1–3 Gen-Z-focused content or partnership strategies with format and platform recommendations
- Deliver a final presentation and report with actionable insights for Wonderwall.sg

REQUIREMENTS

- Students who are interested in editorial content production, or with interest in research.
- Data, research and analytics skills or background preferred.

INDUSTRY SKILLS DEVELOPED

- Audience & Trend Analysis
- Qualitative User Research
- Content Strategy Development

TIMELINE

SEP — NOV 2025

- **Week 1:** Project Kickoff & Platform Familiarisation
- **Week 2:** Gen-Z Segmentation & Trend Research
- **Week 3:** Content Mapping & Touchpoint Analysis
- **Week 4:** Competitor Benchmarking
- **Week 5:** User Research Planning & Execution
- **Week 6:** Insight Synthesis & Pattern Identification
- **Week 7:** Strategy Development
- **Week 8:** Final Presentation & Reflection

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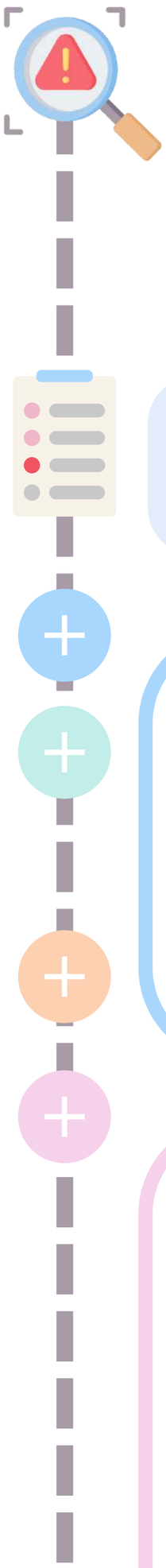
Supporting Partner: Tan Tock Seng Hospital, NHG Health

Eye Can Route



PROBLEM STATEMENT

As a predominantly outpatient service, our resource team entertains ~100-200 outpatient service requests daily via EyeFax email. Currently 2 PSAs are rostered daily to manually screen through and route these requests to the correct action party before replying to the patients. This translates to each PSA manning the EyeFax email for 7hrs daily with the average time spent on each email being 10mins.

TASKS

- To use Generative Artificial Intelligence to understand, classify, and automatically route emails according to their service requests.

DELIVERABLES

- A fully functional AI-powered email classification and routing system.
- Complete technical documentation including system architecture, setup guides and API documentation
- Final project report with research methodology, system evaluation and live demonstration

REQUIREMENTS

- Experience with large language models (like GPT) and AI agents, including prompt engineering and API integration with platforms like OpenAI or Azure AI
- Understanding of AI orchestration - ability to design workflows that combine multiple AI agents for email processing, classification, and routing tasks
- Programming skills in Python to develop the integration layer between AI services and email systems, including handling API responses and implementing fallback mechanisms
- Knowledge of best practices in AI system design, including prompt design, error handling, and responsible AI implementation for processing sensitive email content

INDUSTRY SKILLS DEVELOPED

- Understanding healthcare data and the data storage process
- Working with clinicians and clinical operations team

TIMELINE — SEP — NOV 2025

- **Week 1:** Research and setup development environment, AI APIs and email processing libraries, while establishing the project's technical requirements and constraints.
- **Week 2:** Develop initial proof-of-concept for basic email parsing using AI agents.
- **Week 3:** Implement core classification system using LLMs, including prompt engineering and sample testing.
- **Week 4:** Build the email routing mechanism and integrate it with the classification system to handle different service request types.
- **Week 5:** Build orchestration layer for managing AI agents, with fallback and error handling protocols.
- **Week 6:** Implement system monitoring and logging mechanism for accuracy and performance tracking.
- **Week 7:** Test with real email datasets, fine-tune system, and optimise AI agent interactions.
- **Week 8:** Finalize documentation, prepare the final demonstration, and report with metrics and future recommendations.

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Supporting Partner

YOU TIAO MAN
HERITAGE . INNOVATION . CONVENIENCE

AI-Driven Social Media Trend Analysis & Content Strategy

PROBLEM STATEMENT

As a growing heritage F&B brand, You Tiao Man aims to expand its reach and engagement on Social Media but faces challenges in understanding evolving platform trends and optimising content performance.

TASKS

- Use AI and machine learning tools to scrape, structure, and analyse Social Media data related to trending sounds, hashtags, video formats, and peak posting times.
- Identify patterns in viral content performance relevant to the F&B and lifestyle niche.
- Export insights into dashboards or Excel for easy review.
- Use AI script to schedule a posting calendar aligned with trending topics, including recommended video lengths, captions, and times to post (based on the insights).
- Present final product (rationale, scalability and long-term implementation) to the You Tiao Man team at the end of the project.

DELIVERABLES

- An AI-generated Social Media trends dashboard or Excel analysis
- Example of a content calendar proposal for 1 month
- Final presentation to the You Tiao Man team

INDUSTRY SKILLS DEVELOPED

- Data scraping and analysis using AI tools or APIs
- Social media trend analysis and digital marketing strategy
- Market research and reporting

REQUIREMENTS

- Familiarity with data scraping tools (e.g., Python, APIs) or AI platforms (e.g., ChatGPT, Browse AI, Phantombuster)
- Interest in social media analytics, especially TikTok trends
- Basic knowledge of Excel/Google Sheets and data visualisation
- Background in Business, Communications, or Computer Science preferred

TIMELINE

SEP – NOV 2025

- **Week 1:** Project Orientation with YTM team, define research and KPIs
- **Week 2:** Build AI tools for scraping TikTok trends/competitor content
- **Week 3:** Collect/clean data
- **Week 4:** Conduct initial analysis to identify patterns in content virality
- **Week 5:** Refine data output, compare across industry benchmarks, identify peak posting strategies
- **Week 6:** Draft content strategy calendar with key themes, visuals, and caption templates
- **Week 7**: Create visual dashboard/report to present insights
- **Week 8**: Presentation to YTM, feedback, wrap-up and submission of deliverables

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