Cogal Jacques Tracy Pasaol

Singapore | +6581681140 | jacques.tracy@gmail.com | LinkedIn | jacquescogal.github.io | LeetCode

EDUCATION

Nanyang Technological University, Singapore   **Aug 2020-May 2024**
Double Degree Programme (Double Distinction & Honours)
Bachelor of Engineering (Computer Science) and
Bachelor of Business (with specialization in Business Analytics)

Temasek Polytechnic   **Apr 2015-Apr 2018**
Accounting and Finance (Diploma with Merit)

WORK EXPERIENCE

Shopee   **Singapore**
Software Engineer   *Jun 2024-Present*
Leveraged these tools: Golang, Python, MySQL, Kafka and Grafana etc.
Marketplace core

CPF Board   **Singapore**
Software Engineering Intern   *Dec 2023-May 2024*
Leveraged these tools: Python (FastAPI), JavaScript (Next.js) and Azure Cloud
Involved in projects relating to large language models and data engineering
- Optimised information retrieval of customer-facing internal search engine, improving search relevance by up to 10%
- Streamlined search index creation with azure functions

JP Morgan Chase & Co.   **Singapore**
Software Engineering Intern   *Jun 2023-Aug 2023*
Leveraged these tools: Python, Java, JavaScript (React.js), Oracle Database and Amazon Web Services
Delivered key projects in artificial intelligence and proxy gateway solutions for the financial crimes and asset wealth management teams
- Engineered data pipelines to channel big data into AI models, generating actionable insights for risk assessments
- Developed an SDK that enabled a microservice usage, reducing API gateway calls by over 90% through a proxy with a caching layer
- Integrated the SDK solution with an in-production software to prove its efficacy
- Led a hackathon team to victory at JP Morgan's internal Global Hackathon by developing an innovative anti-money laundering solution

Zuellig Pharma   **Singapore**
Data Analyst Intern   *Sep 2022-Dec 2022*
Leveraged these tools: Python, PostegreSQL Database and Tableau
Engineered data solutions for large-scale, unstructured pharmaceutical datasets, streamlining machine learning model training for data scientists
- Automated data retrieval and cleaning, optimizing machine learning training pipelines
- Validated data cleaning effectiveness via hypo testing, achieving at least 70% population coverage
- Adapted to stakeholder feedback and managed time between projects to deliver successful products for managers in a timely manner

AWARDS AND HONOURS

Champion of GIC Code to Impact 2023   **2023**
Developed AI enabled full stack solution as full-stack, ai and dev-ops engineer

Dean's Honours List AY2022/2023 (BUS)   **2023**
Top 5% of student cohort based on annual academic performance

Champion of J.P Morgan Global Hackathon Singapore 2023   **2023**
Team and frontend lead for a proof of concept serving internal stakeholders

Champion of J.P Morgan Code for Good 2022   **2022**
Designed, developed and deployed solution to address social enterprise problem

PROJECTS

Portfolio Chatbot (Retrieval Augmented Generation AI Chatbot)
TechStack: React, Python Flask, LangChain, OpenAI, AWS EC2, Docker and Pinecone
Site: jacquescogal.github.io
GitHub (Frontend): github.com/jacquescogal/jacquescogal.github.io
Docker Repo (Backend): github.com/jacquescogal/pf_backend
Built portfolio with AI chatbot feature that returns context rich answers to users about myself
- Leveraged latest vector database technology in Pinecone to quickly retrieve relevant document context
- Deployed backend retrieval augmented generation (RAG) AI on ec2 instance

Greek God "Kahoot" App (Decision Tree Game App Demo for Orientation Camp)
TechStack: React, Python FastAPI, Render Server and AWS DynamoDB
Site: jacquescogal.github.io/TOP24_Demo_Frontend
GitHub (Frontend): github.com/jacquescogal/TOP24_Demo_Frontend
GitHub (Backend): github.com/jacquescogal/TOP24_Demo_Backend
Developed full-stack demo app for orientation camp as acting tech lead
- Leveraged asynchronous programming to handle heavy expected I/O operations
- Implemented of JWT access tokens and middleware for user authentication
- Managed WebSocket connections to support "Kahoot" interaction

FlashCard AI (Leverage LLM as a personal flashcard mentor)
TechStack: React, Python Flask, OpenAI and Amazon Web Services (Lambda, Cloudfront, DynamoDB and etc.)
GitHub: github.com/jacquescogal/FlashCardAI
Developed a full-stack web-app that leverages the GPT-4 and AWS infrastructure to deliver an improved flashcard learning experience
- Deployed backend flask with RESTful API design on EC2 with elastic bean stalk
- Implemented user session authentication with JWT access tokens
- Used API gateways to enforce a limit on API calls to prevent abuse and manage cloud service costs

SKILLS

Programming Languages: Python, JavaScript (Typescript, React.js, Angular, Node + Express, Next.js), Golang, Java, C++ and C#

CERTIFICATES

FOCP: FinOps Certified Practitioner   **2023**

AWS Certified Cloud Practitioner   **2023**