

Cogal Jacques Tracy Pasaol

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EDUCATION

School of Computer Science and Engineering and Nanyang Business School
Nanyang Technological University, Singapore

Aug 2020-Present

Double Degree Programme

Bachelor of Engineering (Computer Science) and

Bachelor of Business (with specialization in Business Analytics)

Graduating in May 2024

Temasek Polytechnic

Apr 2015-Apr 2018

Accounting and Finance (Diploma with Merit)

WORK EXPERIENCE

JP Morgan Chase & Co.

Singapore

Software Engineering Intern

Jun 2023-Aug 2023

Leveraged these tools: Python, Java, JavaScript, 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
- Spearheaded the integration of the SDK solution with a production ready software, streamlining development and improving system scalability
- Led a hackathon team to victory at JP Morgan's Global Hackathon by developing an innovative anti-money laundering solution

Zuellig Pharma

Singapore

Data Analyst Associate Specialist, Part-time

Sep 2022-Dec 2022

Leveraged these tools: Python, PostgreSQL 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 hypothesis testing, achieving at least 70% population coverage
- Leveraged Tableau for real-time data analytics and visualization

Novelship

Singapore

Strategy/Business Analyst Intern

May 2022-Aug 2022

Leveraged these tools: Python, SQL Database and Tableau

Automated new key market index, achieving efficient data extraction and processing

- Initiated research on potential new key performance index for startup in niche market
- Conducted competitive analysis through web scraping for data comparison
- Automated Python-to-Tableau pipeline for a new key performance index, enabling data-driven decisions by key stakeholder

Deloitte Touché Tohmatsu Limited

Singapore

External Auditor Intern

Dec 2017-Feb 2018

Created audit documents, mentored peers and performed ad-hoc duties

PROJECTS

FlashCard AI (Personal Project: Leverage LLM as a personal flashcard mentor)

TechStack: React, Python Flask, GPT-4 and Amazon Web Services (Lambda, S3+Cloudfront, DynamoDB and etc.)

Website: flashcardai.app GitHub: github.com/jacquescogal/FlashCardAI

Developed a full-stack web-app that leverages the GPT-4 API and AWS infrastructure to deliver an improved flashcard learning experience

- Considered data security implications; protected data in transit by enforcing HTTPS connections throughout infrastructure and protected sensitive data such as passwords with salt and hashing
- Implemented user session authentication with JWT tokens with expiry
- Used API gateways to enforce a limit on API calls to prevent abuse and manage costs
- Deployed frontend react app by delivering from an S3 bucket through cloudfront
- Deployed backend flask with RESTful API design on EC2 with elastic beanstalk

LikeWise (Group Project: University Social Get-together app)

TechStack: React and Firebase

GitHub: github.com/jacquescogal/likewise-app-react-firebase

Developed a web-app for tertiary students to get together through common interests

- Led development efforts and coordinated scrum meetings
- Controlled backend API access and database tables
- Monitored and approved pull requests from development branches
- Guided and supported team members in development efforts

Fitness and Nutrition android App (Group Project: Social healthy dining and fitness app)

TechStack: Java and Firebase

GitHub: github.com/jacquescogal/CZ2006-Software-Engineering-Fitrition

Developed a fitness and nutrition app with a social aspect to encourage healthy living among Singaporeans

- Ideated functional and non-functional requirements for our app
- Designed UI in xml with android studio
- Led development efforts and supported team members in technical areas

SKILLS

Programming Languages: Python, Javascript, Java, C++, C# and R

Technologies: Amazon Web Services, Git, SQL, NoSQL, RESTful API and LangChain

CERTIFICATES

FOCP: FinOps Certified Practitioner	2023
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AWS Certified Cloud Practitioner	2023
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AWARDS AND HONOURS

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

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

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

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