

JAVIAN NG

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EDUCATION

National University of Singapore

Aug 2022 - Jul 2026

Bachelor of Science in Business Analytics

- NUS Computing Club 26th Main Committee, President
- NUS Overseas College, Vietnam, Ho Chi Minh City, 3 Months
- NUS Overseas College, Paris, France, 6 Months
- Awarded NUS Student Union Council Merit Award

SKILLS SUMMARY

Programming Languages: Python, JavaScript, Java, SQL, TypeScript, Shell Command Language

Tools and Frameworks: Scikit-learn, TensorFlow, SQL, NoSQL, BigQuery, Git, ReactJS, Node.js, AWS CDK, AWS

MOOCs Certifications: Google Cloud Professional Machine Learning Engineer Certification, Dynamic Public Speaking, Google Data Analytics Specialization, Introduction to JavaScript, Literacy in AI, Prompt Engineering for ChatGPT,

Platform Thinking: What's beyond Uber?

UEH BizTech Hackathon 2023 - Third Placing

INTERNSHIP & WORK EXPERIENCE

Parametrix (Paris, France), Machine Learning and Software Engineer Intern

Aug 2024 - Jan 2025

- Conceptualised and fabricated a full-stack application leveraging on Next.js and AWS, engineering core features such as generative AI capabilities and natural language video querying to boost user experience and functionality
- Architected and deployed a scalable AWS infrastructure with AWS CDK, including VPC, Aurora Serverless RDS, Lambda, API Gateway, Glue, S3, and Athena, streamlining multi-developer collaboration
- Conceptualised and programmed advanced AI capabilities with a text-to-SQL workflow using Bedrock, attaining 80% accuracy in natural language query conversion and enabling insights across datasets and document repositories
- Engineered automated AI/ML data pipelines leveraging Glue Crawlers, Athena, and SageMaker for real-time data ingestion, analysis, and prediction, decreasing operational overhead by 70% and enhancing system efficiency
- Designed and constructed interactive dashboards with dynamic data visualizations, enhancing usability and potentially reducing time stakeholders spend extracting insights by 50%
- Developed and tested secure, scalable RESTful APIs using AWS API Gateway, integrating with AWS Lambda, AWS RDS and DynamoDB to enable robust serverless architectures
- Designed and deployed scalable PostgreSQL and NoSQL databases, ensuring data integrity and adaptability to handle complex datasets from multiple insurers and clients
- Authored comprehensive technical documentation covering infrastructure, workflows, and architecture, predicted to reduce onboarding time for new developers by 50% and facilitating cross-team collaboration

Singapore Immunology Network (SigN) (Singapore), Bioinformatics Research Intern

May 2024 - Aug 2024

- Spearheaded analysis of large-scale genomic datasets (>7 million rows), leveraging advanced bioinformatics techniques to uncover critical insights to directly influenced research directions and decision-making
- Designed and implemented a custom automated pipeline by integrating 11+ open-source bioinformatics tools, reducing manual intervention by 40% and accelerating data processing timelines by 30%
- Engineered robust Shell and Python automation scripts to extract and classify cell barcodes, segment TCR α and β chains at single-cell level, and reconstruct TCR chains via de novo assembly, enhancing reproducibility and scalability
- Revolutionized cell barcode extraction methodologies, achieving a 258% increase in barcode recovery (from 608,700 to 2,181,878), improving data quality and downstream analysis accuracy
- Pioneered a novel Python-based algorithm to separate TCR α and β chains without reliance on a whitelist, achieving 90% accuracy across 100 unique cell barcodes using Ward's linkage clustering, setting a new benchmark for TCR chain analysis
- Co-authored "Refining TCR clonotype identification with long-read sequencing technique" submitted to Society for Immunotherapy of Cancer (SITC), as third author and first intern co-author. Positioned among full-time researchers highlighting significant contributions to research project

LFG (Ho Chi Minh, Vietnam), Full Stack Software Developer Intern

May 2023 - Aug 2023

- Led collaboration with a cross-functional team of 4 developers to design and implement 10+ website features

- Partnered with 3 UI/UX designers to ensure a 100% responsive and user-friendly interface

Republic Singapore Air Force (Singapore), *National Service*

Jan 2020 - Apr 2022

- Pioneered the NSF Council to improve welfare and camaraderie among 20+ NSFs across 3 departments, organizing 3 impactful welfare events within 4 months
- Recognized as "Best Airman of the Month" in August 2021 for exceeding expectations and demonstrating initiative
- Selected amongst 100+ NSFs to represent RSAF in National Day Parade 2021 and SAF Day 2021 as part of Guards of Honour, showcasing discipline, precision, and teamwork in high-profile national events

ACTIVITIES

ASEAN Business Youth Organization, *Lead Website Developer*

Jun 2023 - Oct 2024

- Orchestrated a cross-functional team of 7 (3 developers, 2 UI/UX designers, 2 copywriters) across 3 ASEAN countries to develop and deploy a full-stack web application eliminating monthly downtime from 6% to 0%

NUS Computing Club, *President*

Sep 2023 - Sep 2024

- Directed a team of 30 executives to organize 20+ high-impact events, including orientation camps, hackathons, and networking sessions, reaching 5,000+ undergraduates and achieving a 90% participant satisfaction rate
- Strategically managed and allocated a \$300,000 annual budget across 4 departments, optimizing resource distribution to maximize event quality and club engagement

ACJC Overseas Community Involvement Program (Chiangmai), *Vice President*

Jul 2018 - Nov 2018

- Showcased leadership and managerial skills by orchestrating a team of 5 in planning and execution of educational and fun activities for less privileged, and directing and allocating tasks to a group of 30 team members
- Demonstrate adaptability by working around logistical shortages to cater to more than 120 children