Elliott Tay

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SUMMARY

Full Stack Software Engineer and ML practitioner with strong backend architecture and production-grade AI deployment experience. Passionate about optimizing real-time systems, enhancing UX, and integrating scalable ML/AI into full-stack environments.

PROFESSIONAL EXPERIENCE

G.Tech Pte.Ltd   **Singapore, Singapore**
Project Manager / Project IT Manager   Sep 2025 - Present
- Recruited and currently leading a team of four engineers to design, develop, and deploy enterprise-grade software solutions.
- Spearheaded projects supporting the management and optimization of **150+ carparks across Singapore**, enhancing operational efficiency and automation capabilities.
- Coordinate project timelines, stakeholder requirements, and technical implementation, ensuring delivery of scalable and reliable systems.

Software Engineer   Jul 2025 - Aug 2025
- Built and deployed a YOLOv11-based computer vision model to detect barrier anomalies (stuck, normal, dropped) with **88% mAP@50,** served via FastAPI and Docker on AWS EC2 with CI/CD using CircleCI.

BeMyGuest   **Singapore, Singapore**
Junior Software Engineer   Mar 2023 – Dec 2024
- Implemented and integrated third-party APIs using Laravel and SOAP/REST API with testing using PHPUnit, enabling automated booking distribution for partners like the English Premier League and Sentosa. **Improved booking efficiency by 75%** with platforms such as Agoda and Lazada.
- Identified and debugged 20+ frontend and backend bugs, such as UI/UX and API integration issues, enhancing application performance and **reducing downtime by 40%.**
- Leveraged the ELK stack and Sentry to troubleshoot system discrepancies, **resolving 90% of booking issues within 1 hour,** and communicated technical solutions while collaborating with 5+ international partners like Agoda and Trip.com, improving reliability and consumer satisfaction.
- Collaborated with designers and frontend engineers to refine UI/UX, implementing Vue.js performance improvements that **boosted internal team task efficiency by 20%**

PROJECTS

OptiStock (github.com/OptiStock)
- Full-stack AI-powered portfolio optimizer with JWT authentication, featuring an NLP bot called FinBert for sentiment-based market analysis that achieved ~20% annual returns in backtesting. Built with React.js frontend (Lazy Loading, Error Boundaries, CI/CD, Testing) and Redis caching.

Medicine Recommendation System (github.com/Medicine_Recommendation_System)
- AI/ML-powered Flask+React system recommending medicines based on user symptoms using TF-IDF and cosine similarity. Enabled accurate, real-time recommendations with a clean React UI and NLP pipeline trained on medicine data and built with feedback from medical professionals.

SKILLS, LANGUAGES

Programming Languages: JavaScript, Python, PHP, HTML, CSS, Java

Tech Stack: React.js, Vue.js, Next.js, Express.js, Node.js, Tailwind, Bootstrap, Django, Laravel
Data Science/ML/AI Tools: Numpy, Pandas, Scikit-learn, TensorFlow, PyTorch, OpenCV, Keras
Database/DevOps: MySQL, PostgreSQL, MongoDB, CI/CD, Git (Version Control), SQL, NoSQL
Monitoring & Logging: ELK Stack (Elastic Search, Logstash, Kibana), Grafana, Sentry, Linux, Jest
Other Skills: Leadership, Communication Skills (Verbal & Written), Collaborative, Stakeholders Management, Testing, Design, Analytical Skills, Troubleshooting, Deployment (Vercel and Heroku)

EDUCATION

University of London   Expected Completion: 2026
B.Sc. Computer Science (Specialization: Machine Learning & Artificial Intelligence)
Relevant coursework: Web Development, Data Structures and Algorithms, Data Analytics

General Assembly   Nov 2022
Software Engineering Immersive
Relevant Coursework: Frontend Development, Backend Development, Full-Stack Development

CERTIFICATIONS

Responsive Web Development (freecodecamp/responsive-web-design)
FreeCodeCamp   Mar 2022

Data Analysis with Python (freecodecamp/data-analysis-with-python)
FreeCodeCamp   Mar 2022

Financial Markets (coursera/financial-markets**)**
Yale University Online   Sep 2016

Cryptography 1 (coursera/cryptography-1**)**
Stanford University Online   Jul 2016