

# Elliott Tay

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## SUMMARY

Full Stack Software Engineer with a strong backend foundation and expanding frontend mastery. Skilled in designing and delivering secure, scalable applications within dynamic, fast-paced environments. Driven by a passion for creating seamless user experiences, optimizing system performance, and integrating machine learning and AI to solve real-world problems.

## PROFESSIONAL EXPERIENCE

### BeMyGuest

*Software Engineer*

**Singapore, Singapore**

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](https://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](https://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