Zhanghu Zhao

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EDUCATION

University of Helsinki *September 2022 - July 2024*
M.S. in University of Helsinki, Department of Computer Science (GPA:4.77/5) *Helsinki, Finland*

Soochow University *September 2017 - June 2021*
B.S. in Soochow University, Department of Computer Science and Technology (GPA: 3.8/4) *Suzhou, China*

WORK EXPERIENCE

Bravori *September 2023 - December 2023*
Software Developer *Helsinki, Finland*
- Completed development tasks for the Bravori application using **React Native** and **Firebase**.
- Resolved bugs identified during the testing phase in accordance with test results.

University of Helsinki *June 2023 - November 2023*
Research Assistant *Helsinki, Finland*
- Converted Matlab code to **Python**, reducing output time by 90% with vector operation and multi-threading.
- Designed a complete pipeline for the **classification** of New Particle Formation (NPF) events.
- Leveraged **data visualization** techniques to create intuitive and insightful graphical representations which assist atmospheric science researchers with data analysis and interpretation.

PROJECTS

Auction *August 2023 - October 2023*
- Designed and implemented backend services in **ASP.NET** with **MongoDB** and **Postgres**, emphasizing secure service-to-service communication with **RabbitMQ** and **gRPC**.
- Developed a dynamic client-side application using **Next.js** and **Typescript**, featuring **SSO** and real-time push notifications via **SignalR**.
- Established efficient **CI/CD** pipelines using **GitHub Actions** and enabled seamless local deployment using **Docker Compose**.

Snake *June 2023 - August 2023*
- Implemented robust and efficient **WebSocket** connections, enabling seamless real-time communication between the game server and multiple clients.
- Developed secure RESTful APIs on the backend using **Spring Boot**, featuring comprehensive authorization, player matching, and code execution capabilities.
- Crafted an interactive frontend user interface using **Vue.js**, **Bootstrap**, **JavaScript**, and **jQuery** to elevate user engagement and enhance the overall gameplay experience.

Cookify (https://cookify-dralnmatthew.netlify.app/) *April 2023 - June 2023*
- Spearheaded the development of a full-stack platform, utilizing **Node.js** and **Express** for the backend API and **React.js** along with **Redux** for efficient frontend app state management.
- Designed and implemented a **MongoDB** database to seamlessly store, manage, and process data. Utilized **Cloudinary** for static images storage.
- Implemented authentication security measures by integrating **JSON Web Token (JWT)** and email verification mechanisms.

E-Commerce (https://dralnmatthew.com/) *October 2022 - December 2022*
- Engineered and maintained the website using **Django**, implementing crucial features such as user authentication and comprehensive product catalog management.
- Integrated the **PayPal** payment gateway and leveraged **AWS S3** for efficient cloud-based file storage.
- Orchestrated the deployment process on **AWS Elastic Beanstalk**, guaranteeing high availability and scalability of the application.

SKILLS

- **Programming Languages:** Python, Java, JavaScript, C/C++, C#, R
- **Web Development:** Django, Spring Boot, ASP.NET, Node.js, React.js, Vue.js, Next.js, HTML5/CSS, MongoDB, PostgreSQL, MySQL, Redis, RabbitMQ, OAuth 2.0, OpenIdConnect, SSO, Docker, CI/CD, AWS, GCP, Git, Linux, VSCode, IntelliJ
- **Machine Learning Libraries:** NumPy, Matplotlib, Pandas, Scikit-Learn, PyTorch