

Shicheng Li

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Education

King's College London

Bachelor of Science in Computer Science

Classification: First Class Honour Degree (High Distinction Degree)

London, United Kingdom

Expected Grad: May 2025

Publication

Zhongqi Sheng, Yubin Wang, Shicheng Li, et al. Research on kinematics modeling and path planning of a hyper-redundant continuum robot[J]. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2024, 238(12): 5880-5890.

Course Project

Team Task Management Application | Django

London, United Kingdom

Team Leader

November 2023 – January 2024

- Employed scrum to drive project momentum through daily stand-ups and weekly sprints for product evolving with high efficiency.
- Designed and implemented core features such as secure user authentication using Django's framework
- Developed real-time collaborative tools with WebSocket for dynamic updates without page reloads.
- Established a comprehensive automated testing regime using Django's framework for unit and integration tests to ensure thorough coverage and application reliability; enhanced code quality and stability with continuous integration practices.

Food Logging Application | React Native, Node.js, TypeScript, Unity, MongoDB

London, United Kingdom

Team Leader

January 2024 – April 2024

- Led the development of a dietary tracking app based on React Native on iOS and Android with seamless cross-platform functionality.
- Employed cryptographic techniques, i.e. OAuth, to secure key application features including user registration and profile management
- Enhanced user engagement with a Unity-based gamification reward system that promotes sustained healthy eating behaviors.
- Built a robust backend using MongoDB for a scalable food database to support dynamic user entries and custom food categorization.
- Integrated Express.js to handle API requests efficiently, ensuring smooth data transactions and scalability for growing user data.

Work Experience

Neusoft | Python

Shenyang, China

Intern Machine Learning Engineers

June 2024 – August 2024

- Enhanced data quality and streamlined preprocessing workflows using Python's Pandas and NumPy, which facilitated the team's ability to perform sophisticated predictive analyses.
- Contributed to the development and fine-tuning of predictive models by integrating PCA for feature reduction and employing Scikit-learn for model optimization, significantly increasing the accuracy of fault predictions.
- Aided in backend development with Node.js, ensuring robust application performance and seamless data integration.
- Supported project communications by generating insightful visualizations with Matplotlib, which clarified complex analytical results for non-technical stakeholders, enhancing project transparency and engagement.

Research Experience

Survey of Membership Inference in Machine Learning | Python

March 2024–July 2024

- Conducted a comprehensive literature review of membership inference attacks covering research papers from 2017.
- Implemented a pipeline for simulating multiple membership inference attacks.
- Performed comparative experiments among different attack strategies in black-box and white-box settings.
- Explored trade-off between accuracy and privacy and established a baseline for various defense mechanisms.

Autonomous Home Monitoring Robot | Python, ROS

December 2023 – January 2024

- Engineered pathfinding algorithms and calibrated multisensory data integration to enhance the robot's navigation capabilities.
- Optimized algorithms in the Robot Operating System for dynamic interaction and precision in room-specific tasks, improving robot responsiveness and navigational accuracy.
- Integrated the YOLO algorithm for object detection and fine-tuned it to maintain high accuracy across varying light conditions.
- Implemented a Text-To-Speech system with real-time synchronization of audio feedback with detected objects and actions.
- Led the initiative for a rigorous scenario-based testing using video simulations, aiming to mirror diverse home settings.

Leadership Experience

HACKLONDON 2024

London, United Kingdom

Leader of Development Team

March 2024

- Collaborated with 4 team member to develop a automating pull request Chrome Extension within 24 hours.
- Emphasized teamwork and efficient problem-solving under tight deadlines, ensuring project completion.

Technical Skills and Relevant Coursework

Programming: Python, Java, SQL, SCALA, Node.js, JAVASCRIPT, CSS, HTML, ROS, React-Native, Django

Multilingual: Mandarin (Native), English (Full professional proficiency), French (Elementary proficiency)

Relevant Coursework: Computer system, Programming Practice & Applications, Data Structures, Database Systems, Artificial Intelligence, Operating Systems & Concurrency, Robotics, Signals & Systems, Discrete mathematics, Programming Language Design Paradigms