Yulong Liang

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Summary

Strong Computer Science background in software engineering and development cultivated by Georgia Tech; Proficient in trending coding and programming across multiple languages and software tools; Possesses robust data analytics skills with proven experience in research, data optimization, and problem-solving.

Technical Skills

Programming Language: Python, Java, JavaScript, Julia, MATLAB, C, C++, CUDA, Golang, HTML5, CSS, MySQL
Framework & Tools: React, Angular, D3, Node.js, Tableau, GitHub, OpenAPI, Linux, AWS, Docker, Kafka

Education

Georgia Institute of Technology   Aug 2022 - May 2024
Master of Science in Computational Science and Engineering   *GPA: 3.85/4*

Georgia Institute of Technology   Aug 2018 - May 2022
Bachelor of Science in Applied Physics, Minor in Computer Science, Highest Honor Distinction   *GPA: 3.83/4*

Work Experience

Tencent   Jun 2021 − Aug 2021
Back-end Software Engineer   *Beijing, China*

- Built a back-end server for a cross-platform search system catering to up to **30,000** employees using **Golang**
- Developed and maintained a secure and efficient internal API with **Node.js** and **OpenAPI**, facilitating seamless data communication within the team service system over a **3**-month period
- Designed and implemented a reliable RPC service for the internet system, resulting in a **23%** enhancement in real-time data update efficiency using **tRPC-GO**
- Conducted data cleaning and standardization for **20,000+** employees, contributing to the enhancement of the Tencent Information Security System's data quality and integrity using **MySQL**

Citibank   May 2024 − Aug 2024
Full Stack Software Engineer   *Atlanta, GA*

- Developed a robust data management platform for a bank system using **Java Spring Boot** framework, achieving a **32%** reduction in average response time.
- Customized an informative front-end web page using **AngularJS**, implementing numerous UI enhancements that resulted in a **20%** increase in daily active users
- Built an advanced dataset system using **MySQL** and implemented over **50** unit tests, increasing test coverage by **40%** and reducing bug rates by **25%**

Georgia Institute of Technology, College of Computing   Aug 2022 − Jan 2024
Graduate Research Assistant   *Atlanta, GA*

- Utilize **Pytorch** to actively involve with current scientific machine learning and uncertainty quantification projects (plasma fusion and DESC stellarator optimization) led by Professor Peng Chen
- Apply **DESC library** to conduct force error balance analysis within the dynamic stellarator structure, generating perturbation results for pressure and rotational transform profiles with a sample size of up to **8000**
- Implemented a projected neural network using **Numpy** to train an input-output map in a 3D stellarator environment, Achieved an impressive reduction in force error for plasma fusion flow by **18%**, demonstrating problem-solving and machine-learning skills

Institute of Physics, Chinese Academy of Science   Jun 2019 − Sep 2019
Research Assistant   *Beijing, China*

- Managed and trained **5** databases derived from electronic coherence in a 2D electronic spectroscopy experiment and produced graphical results with visualized data utilizing **MATLAB** and **MySQL**
- Formulated a comprehensive and professional experiment proposal, integrating the acquired numerical results to substantiate the research objectives with **Latex** and **Tableau**
- Designed and implemented an electronic signal detection tool utilizing **Java** and **LTspice**, leading to a **15%** improvement in experiment response time and a **25%** reduction in detection error

Project Experience

Speech Activity Detector | **Team Leader** | *Python, JavaScript, MATLAB, GitHub* [*Web*](#)   Aug 2021 − Dec 2021

- Designed a virtual tool using **Numpy** to detect human speech activity and label the corresponding time intervals for various audio inputs, employing a test sample size of **500**
- Processed data with three predictive models: Random Forest, Support Vector Machine and Adaptive Boosting. Achieved an accuracy of **90.8%** in the output results through implementation in both **Python** and **MATLAB**
- Developed a dedicated website using **JavaScript**, **HTML5**, and **CSS** to showcase our accomplishments and document our project report across **4** sections