

Lipepei Sun

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Skills and Qualifications

Programming Languages: Python, Java, C, C++, HTML, CSS, JavaScript, React, Bootstrap, SQL, Postgres

Cloud Technologies: AWS services including S3, Lambda, DynamoDB

Programming Tools: Git, Node.js, Jupyter Notebook, IntelliJ IDEA, CLion, and VS Code

Software Development: Object-Oriented Design (OOD), algorithms, data structures

Research Experience: Large Language Models, Human-Computer Interaction, Human-Centered Design

Education

Northeastern University

Expected December 2025

Master of Science in Computer Science (GPA 4.0)

- Relevant Coursework: Object-Oriented Design, Data Structures, Algorithms, Discrete Structures

University of Washington

2009 - 2016

Master of Architecture (GPA 3.67) | Bachelor of Arts in Architecture (GPA 3.66)

Work Experience

Full-Stack SDE Intern, Capital Technology Group

Present

- Designed and implemented scalable web applications for analyzing government contract protest decisions using Java, Spring Boot, and Docker.
- Built RESTful APIs and developed front-end web interfaces with React and Typescript, integrating them with back-end search features using Elasticsearch, Postgres database, GitHub, AWS ECR and AWS S3.

Research Apprenticeship, Computing Research Association

Present

- Conducted research on using large language models (LLMs) to create interactive personas.
- Conducted extensive research on bias and stereotype detection, monitoring, and mitigation strategies.

Licensed Architect, Miller Hull Partnership, Seattle

2015 – 2023

- Collaborated with cross-functional teams to develop and implement innovative design solutions.
- Led visualization efforts and effectively communicated technical concepts to diverse stakeholders.

Projects

Personal Website

2023—Present

- Developed a dynamic personal website leveraging Bootstrap for responsive design.
- Showcased proficiency in front-end development with a user-friendly interface and seamless navigation.
- Demonstrated skills in HTML, CSS, and JavaScript, optimized for various devices and screen sizes.

Building Monitor System

2023—Present

- Developed an environmental monitoring system using AWS DynamoDB and Lambda.
- Built sensor devices to collect temperature, humidity, CO2 levels, and PM2.5 data.

Santa Cross the Street Game

2023

- Designed and implemented a Python-based interactive game with a GUI using OOD.
- Implemented robust error handling, unit testing, and efficient code organization.

Building Façade Layouts and Optimization

2023

- Applied discrete mathematics and Python programming, along with Matplotlib for visualization.
- Optimized building façade layouts, prioritizing natural light and aesthetic appeal.

Certifications and Volunteer Experience

- AWS Certified Cloud Practitioner
- Volunteered with ACE Mentor Program, Food Lifeline, and Miller Hull Open Studio