

Henry X. Song

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Education

Seattle University

Master of Science in Computer Science, Software Engineering

Seattle, WA

Aug 2021 - Mar 2023

Relevant Coursework: Introduction to Software Engineering, Distributed Systems, Artificial Intelligence, Project Management, Software Architecture, Software Testing and Debugging, Computer Graphics, Mobile Application Development

University of Guam

Bachelor of Science in Computer Science

Mangilao, GU

Aug 2018 - May 2021

Relevant Coursework: Database Management Systems, Data Structures and Algorithms, Operating Systems, Systems Analysis and Design, Assembly Language, Machine Learning/AI, Linear Algebra, Discrete Structures, Numerical Methods

Professional Experience

Xaigos Incorporated

Full Stack Software Engineer, Contract

Seattle, WA (Remote)

Oct 2023 – Present

- Designed and engineered proprietary PDF redaction software capable of detecting over 90% of target matches.
- Optimized redaction algorithm to reduce processing times by 70%.
- Integrated user authentication system with custom-built subscription management and 3rd party payment gateway services.
- Built and maintained custom encryption utilizing RSA-2048 and AES-256 hybrid encryption model.
- Streamlined CI/CD development practices utilizing GitHub Actions and Firebase Hosting.

Bilimetrix USA

ML/Software Engineer Apprentice

Seattle, WA (Remote)

Sept 2022 – Mar 2023

- Developed and refined new and existing ML.NET models to ensure pipeline functionality and guardrail conditions are met with a correlation of 90% or higher.
- Pioneered algorithm correcting blue images to provide higher accuracy readings 99.99% of the time.
- Ensure adequate test coverage of overall project, pipeline, and models with 95% coverage.

Guam NSF EPSCOR (GECCO)

Researcher

Mangilao, GU

Jun 2021 – Jul 2021

- Composed paper titled: Mathematical Model and Analysis of the Effects of Overfishing on Coral Reef Ecosystems
- Coordinated with team and mentors to analyze real-time problems and propose solutions through research and analysis.
- Modeled coral reef ecosystem dynamics utilizing differential equations.
- Analyzed optimal strategies for fishing using game theory.
- Developed and streamlined MATLAB scripts to perform calculations necessary to our model and research.

Project Experience

Dear Diary – Mobile Story Archive

Seattle University

Seattle, WA

- Designed to improve user experience through user-conscious design patterns and layouts.
- Implemented in Flutter and Firebase to maximize compatibility and optimize communication between frontend and backend components.
- Ensured functionality and performance with over 80% automated unit, functional, and integration testing.
- Tools Utilized: Flutter framework, Dart, Firebase Database, Firebase Storage, Firebase Authentication, Git

Postal Address Validator

Seattle University

Seattle, WA

- Capable of searching addresses within and across supported countries.
- Utilized designs such as decorator, singleton, strategy, and command patterns to ensure optimal functionality and scalability, and defined REST API protocol documentation to allow for external API usage.
- Tools Utilized: ReactJS framework, Java Springboot, H2 Relational Database, Git

Skills

Technical: Python, Java, Angular JS, Typescript, Dart, Flutter, C++/C, C#, ASP.NET, Microsoft Azure, Git, MATLAB.

Language: Native English, conversational Chinese.