

Henry Ramstad

Seattle, WA | 971-337-0106 | henryjr@uw.edu | <https://github.com/HenryR2112>

Education

University of Washington

M.S. Applied & Computational Mathematics

B.S. Applied Mathematics: Data Science- GPA: 3.89

Seattle, WA

June 2027

June 2025

Experience

Data Scientist I

June 2025 - Present

Bardy Technologies Inc.

Vashon, WA

- Implemented embedded C motion detection algorithms, testing and evaluating metrics using extracted data from custom structures.
- Applied advanced signal processing techniques to extract respiration, motion, and artifact from live on device data, focusing on patient safety and device efficacy.
- Developed machine learning pipelines which generated statistically significant results on covariates of patient outcomes in EMS response situations.

Software Engineer Intern

June 2024 - June 2025

Bardy Technologies Inc.

Vashon, WA

- Medical Device Company specializing in embedded cardiographic devices, tasked with processing 14,000 XML medical cases into custom data structures for use in device algorithm testing.
- Authored FDA Statistical paper on representative data subsets used in testing to ensure patient demographics and outcomes of device testing compare with key populations.

Clinical Laboratory Assistant – Database Management

January 2022 - July 2022

University of Washington Medical Center

Montlake, WA

- Monitored 600,000 user database managing data transfers between EPIC software and Sunquest laboratory information system.

Projects

Sparse Matrix Solver |*Rust, Parallel computing, Machine Learning*

May 2024

- Implemented a Rust based linear algebra solver for banded matrix systems, Achieving magnitudes of performance improvement over standard LU decomposition methods. Performance increases attributed to parallel computing and advantages of matrix sparsity.
- Analyzed performance using regression with a projected 6.56 second run time for a 1TB memory matrix system barring memory allocation issues

Technical Skills

Languages: Python, C, C++, Cuda, Rust, R, Matlab

Skills: Linear Systems Analysis, Machine learning, Supervised learning, Numeric approximation, Technical Writing, OOP, Data visualization, data cleaning, Excel, Statistical modeling, optimization, Slurm, Linux, signal processing, spectral methods, GPU programming, MPI,

Personal

NCAA Division 1 Athlete

September 2022 - Present

University of Washington Rowing team

Seattle, WA