

Hugh Gramelspacher

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EDUCATION

University of Washington - Seattle Campus

Seattle, WA

Bachelor of Science in Computer Science and Bachelor of Arts in History

Sep 2022 - Expected Dec 2026

- GPA: 3.93
- Relevant Courses: Data Structures and Algorithms, Software Design and Implementation, Hardware/Software Interface, Systems Programming, Web Development, Introduction to Database Systems, Machine Learning, Deep Learning

PROJECTS

Fantasy Football Draft Optimizer | *Python, NumPy, Pandas, R, Yahoo Fantasy API*

- Designed Monte Carlo simulation engine to model thousands of draft scenarios, applying probability, data structures, and optimization techniques to support decision-making.
- Applied statistical analysis and visualization to generate probability distributions of league standings.
- Integrated with Yahoo Fantasy API for real-time computational analytics and predictive modeling.
- Created simulation models that improved decision-making accuracy under uncertainty in dynamic environments.

Language Learning Platform | *Next.js, TypeScript, Firebase, Azure TTS, Gemini API*

- Built a scalable data system for adaptive spaced repetition, leveraging applied mathematics and computational models of memory.
- Implemented analytics pipeline to track user performance and optimize vocabulary retention.
- Collaborated in a multidisciplinary team environment to design and deploy scalable learning features.

Snack Business Sales Projection Model | *NumPy, Pandas, scikit-learn, Tableau, MATLAB, R*

- Developed regression and machine learning models for forecasting, improving operational effectiveness and resource planning.
- Prototyped mathematical models in MATLAB and R to validate long-term demand and profit optimization.
- Automated reporting with Tableau dashboards, enhancing decision-making and organizational efficiency.
- Applied optimization and decision-making frameworks to recommend actionable business strategies.

EXPERIENCE

Snack Lounge Operations Manager

Apr 2025 – Present

Association for Computing Machinery, University of Washington

Seattle, WA

- Applied data-driven decision-making and optimization to manage \$20,000+ in annual purchasing and sales.
- Modeled inventory systems to reduce theft by 75% and improve operational efficiency.
- Increased profit margins by 50% by analyzing supply chain data and implementing transformation strategies.
- Coordinated with engineers, student leaders, and vendors to align technical models with operational goals.

Inventory and Reimbursement Specialist

Aug 2022 – Apr 2025

Executive Office for Shared Services, University of Washington

Seattle, WA

- Streamlined 1,500+ asset tracking records using computational analytics to improve data accuracy and retrieval.
- Automated record reconciliation with Python scripts, improving data consistency across 1,500+ assets.
- Processed \$10,000+ in monthly reimbursements with strict adherence to systems modeling and compliance requirements.

TECHNICAL SKILLS

Linux, C++, R, Python, Java, data structures, machine learning, deep learning, mathematics, communication skills, MATLAB, NumPy, Pandas, scikit-learn, Tableau, SQL, JavaScript, TypeScript, React, Next.js, Firebase, Git, Docker, Bash, LaTeX