

Joseph Laurent Krueger

Software Engineer

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🎓 EDUCATION

University of Washington (Seattle campus)

December 2024 | Seattle, WA, United States

B.S. Computer Science, Minor in Business

3.70/4.0 GPA

President and Co-founder of Clearvote, Algorithmic Trading Club, Salsa Club, UW Farm

Featured Coursework:

Algorithms, Computer Security, Data Structures, Distributed Systems (Paxos), Hardware/Software Interface, Natural Language Processing, Parallel Computing, Software Design & Implementation, Systems Programming, Statistics, Accounting (with Excel), Management, Marketing

💻 EXPERIENCE

Clean Power Research, Software Engineering Intern 🔗

June 2024 – October 2024 | Bellevue, WA

- Designed and implemented a scalable, fault-tolerant, **.NET** app that inserts charts into PDFs using dependency injection
- Deployed existing orchestration infrastructure through **AWS Lambda** to connect with a **containerized Node.JS app**
- Designed new charts to generate on-demand reports in under 5 seconds used by HVAC contractors across the country
- Wrote tests and technical documentation and implemented a monitoring system following a production-ready protocol

Clearvote, Co-founder 🔗

August 2023 – Present | Seattle, WA

- Founded a student run non-profit startup developing a cross-functional **Next.js application** deployed through AWS
- Improved network performance to support over **over 3000 users** during a critical election period
- Designed preprocessing system that web-scrapes local candidate data with sentiment analysis (fine-tuned GPT-4o) and voting district geodata to provide localized election information across the state of Washington
- Setup a throttled **RESTful API** using **Lambda** and **DynamoDB (NoSQL)** to optimize database access and reduce costs
- Leading shared team vision on UI design, security, cloud architecture scalability, and open-source contributions

MCG Health, Software Engineering Intern 🔗

June 2023 – September 2023 | Seattle, WA

- Worked on the CareWebQI Team to overhaul an In-patient diagnostic and perscription tool used by **2,800 hospitals**
- Migrated from a deprecated version of **Angular** to work with a **.NET Core** backend
- Created a CI/CD pipeline in **Azure** for automated testing and deployment
- Added auto-completion and code lookup support for **70,000 medical care guideline codes**
- Applied agile project management principles in cross-team sprint planning sessions with **Confluence** and **JIRA**

The University of Washington, Teaching Assistant 🔗

January 2023 – June 2023 | Seattle, WA

- Led bi-weekly instructional quiz sessions and wrote exam questions for a new intro computer science course (CSE 122)
- Held office hours and individual tutoring for challenging topics of an upper-level systems programming class (CSE 351)
- Drafted grading policy for homework, midterms, quizzes, and exams

📦 SKILLS

Technical

Python, Java, C++, SQL (MySQL, SQLite), Linux/Unix Shell Scripting, Git/GitHub, Docker, REST APIs, TCP/IP Networking, CDN (Content Delivery Networks), Cloud Platforms (AWS, GCP, Azure), Monitoring Tools (Amazon CloudWatch), CI/CD Pipelines, Debugging Tools (gdb), D3

Conceptual

Production Debugging, Capacity Planning, System Reliability Engineering (SRE), Scalability and Performance Optimization, Incident Management, Distributed Systems Design, Microservices Architecture, Agile Development, DevOps Practices, High Availability Systems, Fault Tolerance, Data Analysis and Visualization, Cookie security, SQL Injection, IAM Resource Management

📁 SIDE PROJECTS

Financial Portfolio Rebalancer, Full Stack Application 🔗

April 2024 - Present

- Trade Dashboard**: Developed a responsive **Flutter application** for stock trades, prioritizing accessibility and UX design
- Auto Trader**: A **C++ Technical Analysis application** with data caching to enable **sub-5-second stock speculations** and **>25% YOY returns** using an estimated moving average algorithm
- Time Series Forecast**: Designing a **Kubernetes cluster** integrated with **Prometheus** and **Grafana** to ingest preprocessed stock data and train a **supervised regression machine learning model** for stock price time series forecasting

DubHacks Hackathon, illustrAltor — Winner 🔗

October 2022

Unsuccessful Music Career, Spotify Album 🔗

September 2020 – July 2021