# Joseph Laurent Krueger

# Software Development Engineer

### **EDUCATION**

#### University of Washington (Seattle campus)

B.S. Computer Science, Minor in Business

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

# </> </> 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 via dependency injected data
- Extended existing orchestration infrastructure with AWS Lambda to connect with a containerized Node.JS app
- Designed new charts generated for on-demand reports in under 5 seconds used by HVAC contractors across the country
- · Wrote technical documentation and automated tests for debugging and monitoring to a production-ready coding standard

#### Clearvote, Co-founder &

August 2023 — Present | Seattle, WA

December 2024

GPA: 3.70/4.0

- Founded a student-run non-profit developing a cross-functional, open-source Next.js application deployed through AWS
- Deployed a throttled, high availability RESTful API supporting over over 3000 users during a critical usage period
- Setup a **DynamoDB** NoSQL database leveraging web-scraped candidate data enriched with finetuned GPT-4o metrics and state geodata boundaries to provide localized election information across the state of Washington
- · Leading prioritization of dependency management, user research, security, cloud architecture and code quality

MCG Health, Software Engineering Intern &

June 2023 — September 2023 | Seattle, WA

- · Worked on the CareWebQI Team to overhaul an In-patient diagnostic and perscritption 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

### **PROJECTS**

## Financial Portfolio Rebalancer, iOS/Android Application &

April 2024 — Present

- Led development of a screen-reader accessible, cross-platform financial app using Flutter with MVC design principles
- Integrated real-time stock data from an API with efficient error handling and retry mechanisms prioritizing data consistency
- Implemented state management using Hive for persistent storage and caching
- · Developed and tested undo/redo functionality with multi-threading to maintain UI responsiveness
- Designing a C++ stock speculation engine using time-series analysis models trained on distributed Kubernetes clusters

## **SKILLS**

Mobile Development: Cross-platform (Flutter, React Native), SEO, Responsive Design, Tailwind CSS, Material UI

**Testing:** Monitoring (AWS CloudWatch), Testing (Unit, Integration, Performance), Test-Driven Development **Project Management:** Software Development Lifecycle, Agile Methodology (Scrum with Confluence, Jira, GitHub, GitLab)

**System Architecture:** API and service development, x86-64, ARM, Distributed system design, OOP Design Patterns

Frontend: REST API Integration, Client-Side State Management, HTML5, CSS3, ES6 JS
Frameworks: Flutter (iOS, Anderoid development), .NET, Flask, React, Next.js, Vue, AngularJS
Database Systems: ER Modeling, Relational Databases (SQLite, MySQL), NoSQL (DynamoDB)