

# Joseph Laurent Krueger

 Software Engineer

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## EDUCATION

### University of Washington (Seattle campus)

September 2022 — December 2024

Bachelor of Science in Computer Science, Minor in Business

GPA: 3.70/4.0

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 a scalable, fault-tolerant **.NET** API service that inserts charts into PDFs from interface-defined endpoints
- 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

- 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 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**

## PROJECTS

### Financial Portfolio Rebalancer, Full Stack Application

April 2024 — Present

- *Trade Dashboard*: Designed a responsive **Flutter** application for stock trades, prioritizing accessibility and UX design
- *Auto Trader*: Developed 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

- Built a Flask app that makes picture books out of novels with AI generated images and won from a pool of 455 participants

### Dempsey Startup Competition, Autodubs — Semi-finalist

March 2023 — May 2023

- Built a voice-preserving translation app, wrote an 8-page business proposal, and led engagement with over 300 judges

## SKILLS

<b>Cloud Infrastructure:</b>	Docker, Kubernetes, AWS (RDB, Lambda, DynamoDB, EC2, S3, Amplify), Azure, IaC (AWS CDK)
<b>Languages:</b>	C#, Java, TypeScript, Python, Dart, C++, C, R
<b>Frameworks:</b>	.NET, Flask, React, Next.js, Vue, AngularJS, Flutter (iOS and Android development)
<b>System Architecture:</b>	API/Service development, x86-64/ARM, Distributed systems, Design patterns & SOLID principles
<b>Database Systems:</b>	ER Modeling, Relational Databases (SQLite, MySQL), NoSQL (DynamoDB)
<b>DevOps:</b>	CI/CD pipelines (Azure DevOps), Shell scripting (PowerShell, Bash), Linux/Unix administration

**Dev Tools:** Chrome DevTools, Build Systems (Make, CMake, Gradle), Source control (Git), GDB