Joshua Jung

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Education

University of Washington - Seattle Expected Jun 2026
Bachelor of Science in Computer Science *GPA: 3.93/4.0*

Coursework: Machine Learning/Artificial Intelligence, Computer Vision, Deep Learning, Database, Algorithms, Data Structures, Linear Algebra, Discrete Mathematics & Probability, Software Design & Implementation, Distributed Systems

Experience

Elder Research Inc. May 2024 - Aug 2024
Software Engineer Intern *Arlington, VA*

- Developed Keystract, a collection of keyword extraction **machine learning models**, for a government client to deliver data-driven insights and aid with insider threat detection with an **Agile**, **cross-functional** team
- Created novel **LLM-based** models to extract optimal keywords with **90% accuracy** across multiple datasets
- Analyzed and cleaned datasets with **natural language processing** techniques to improve accuracy by 17%
- Reduced testing time by **50%** by implementing **CI/CD** pipelines and using **GitLab** to automate testing

Dabble Jun 2023 - Sep 2023
Software Engineering Intern *Seattle, WA*

- Collaborated in **full-stack development** of a social media startup incubated in DubHacks Next, aimed at redefining social communities and preventing user attrition within groups
- Built a responsive, cross-platform mobile front end UI for 6 pages with **React, Ionic, and Material-UI**
- Created 3 backend services and **REST APIs** to connect User Profile to a database using **Axios** and **Node**
- Utilized **Express** to interface with a **MongoDB** database to seamlessly fetch and update user data
- Led promotional efforts by engaging with **700+** students and alumni at career fairs and networking events

Projects

Geospatial Upscaling Network | *Python, NumPy, PyTorch*

- Evaluated deep learning networks to transform low-detail Google 3D view to detailed ground-level city views using **PyTorch** and **Jupyter Notebooks**
- Reduced training time by 5 weeks by deploying **Google Engine VMs** to train state-of-the-art upscaling models
- Automated dataset creation using **Unity** and **Cesium** to align **30,000+** images with geospatial metadata
- Presented findings at a research symposium, engaging with **100+** peers and faculty to raise awareness about the project's potential applications and future implications

DriftCar | *Javascript, Python, NumPy, PyTorch*

- Created 'DriftCar', a game for designing custom race tracks and racing against up to 5 friends and **Artificial Intelligence** using **Python**
- Utilized **NumPy** and **PyTorch** to train **reinforcement learning algorithms** for **90%** autonomous navigation

Multithreaded File System Search | *C, C++, Linux, POSIX, HTML*

- Built a web server in **C++** to search a 1000+ large file system and show ranked results in a Google-inspired UI
- Optimized memory access and leveraged **parallelization** for a 300% improved runtime
- Ensured robustness with a custom test suite of **200+** unit tests, functional tests, and integration tests
- Protected against **4+ security threats** like cross-site scripting and dictionary traversal attacks

Skills

Languages: Java, Python, C, C++, SQL, JavaScript/Typescript, HTML, CSS
Technologies: ReactJS, Node.JS, Next.JS, Express.JS, NumPy, PyTorch, MongoDB, JUnit, Axios, Redux, Material-UI
Developer Tools: Git, AWS, Google Cloud, Azure, Microsoft Office, Linux, Postman, Docker, Linux