Joseph Heupler

jheupler@berkeley.edu | +1 (510) 213-8712 | linkedin.com/in/joseph-heupler | github.com/java-heapler

Education

University of California, Berkeley — Berkeley, CA
Bachelor of Arts in Data Science and Cognitive Science — *Aug. 2019 – Aug. 2024*

Pasadena City College — Pasadena, CA
Associate of Arts in Engineering and Technology; ***Dean's List Recipient*** — *Aug. 2016 – Aug. 2019*

Experience

Software Engineer — Sep. 2024 – Present
NavAR — *Remote*

- Built indoor navigation features with **Apple ARKit**, achieving a 20% improvement in **3D orientation** accuracy.
- Integrated **hardware beacons** to improve spatial accuracy and ensure reliable indoor positioning.
- Optimized **AR navigation algorithms**, reducing latency and enhancing real-time user experience.

Software Engineer Intern — May 2022 – Sep. 2022
FlyOneO — *Berkeley, CA*

- Developed a full-stack website using **Node.js**, **React**, and **CSS**.
- Created a **Flask** microservice with **NLTK** for text sentiment analysis.
- Proposed **AI/ML** solutions for local clinics to automate communication workflows, saving 10+ staff hours weekly.

Founding Software Engineer — Aug. 2018 – Jun. 2019
AI Club — *Pasadena, CA*

- Built machine learning models with **Python** and **Scikit-learn** for image classification and sentiment analysis.
- Created data pipelines using **SQL** and **Pandas**, improving preprocessing workflows by 40%.
- Led projects with **Git** and **GitHub**, promoting version control and collaborative coding.
- Conducted AI workshops using **Jupyter Notebooks** to teach machine learning concepts to over 50 participants.

Technical Skills

Languages: Python, Java, C, C++, JavaScript, SQL, HTML, CSS, Bash
Libraries: Threading, Multiprocessing, Requests, NumPy, Selenium, Bootstrap
Frameworks: Spring Boot, Node.js, Express.js, FastAPI, Flask, .NET, React, PyTest, JUnit, GraphQL
Tools: Git, GitHub Actions, Docker, Kubernetes, MySQL, MongoDB, SQLite, Maven, Postman, Xcode
Platforms: Web, GitHub, AWS, Linux, Windows, macOS
Skills: Full-stack Development, REST APIs, Microservices, Version Control Systems, CI/CD, DevOps, Jenkins, Cloud Computing, Algorithms, Data Structures, OOP, Database Systems

Projects

Ants Vs. SomeBees: Developed a tower defense game using **Python**, focusing on OOP and functional programming.

Scheme: Implemented an interpreter for the Scheme language using **Python**, focusing on parsing and evaluation.

Ataxx: Created a board game with a graphical user interface using **Java** and **Java Swing**.

Enigma: Simulated the Enigma machine using **Java**, focusing on cryptographic algorithms.

Gitlet: Developed a version control system similar to Git using **Java**, implemented 8 core version control features.

Philphix: Developed a text processing tool using **C**, focusing on efficient text parsing and replacement algorithms.

Pacman: Achieved 85% success for Pacman maze navigation using algorithms and reinforcement learning in **Python**.

Awards and Honors

UC Irvine Research Conference: Presented research on cognitive science at the Community College Honors Research Conference, Apr. 2019, receiving commendation for innovative methodology.

Extracurricular Activities

Participant — Fall 2019 – Spring 2020
Frontend Web Design DeCal — *UC Berkeley*

- Developed web applications using **HTML**, **CSS**, and **JavaScript**.
- Integrated **REST APIs** into web apps for project deployment.
- Designed UI/UX prototypes using **Adobe XD** and **Figma**.
- Deployed scalable websites across browsers and devices.