Will Farhat

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Education

University of Southern California – Viterbi Engineering and School of Cinematic Arts   **Graduating May 2025**
    Bachelor of Science in Computer Science and Games - 3.96 GPA
    Honors: Dean's List, CURVE Research Fellowship, Trojans Affiliates Scholar

Harvard-Westlake High School   **June 2021**

Experience

Bloomberg LP - Software Engineering Intern   **May 2022 - August 2022**
- Rebuilt the entire Bloomberg Businessweek homepage in NextJS; used by over 10 million unique monthly users
- Worked with senior engineers to design a new system for hydrating and rendering all content on Bloomberg.com; deployed sitewide to 50 million unique monthly users and increased client-side performance by up to 2.5 times

NASA SUITS Team Aegis - Terrain Team Lead and Engineer   **January 2022 - Present**
- Serving as a team lead of a 70-person group selected by NASA to build a concept HoloLens AR HUD for Lunar moonwalks
- Constructing data processing and visualization pipelines for Lunar terrain with Python, C#, and Unity
- Pitched the finished prototype directly to a panel of 30 NASA officials and scientists at Houston Space Center

BodyAI - Software Engineer, Part Time   **February 2022 - Present**
- Programming a full stack glucose monitoring app with Typescript, React Native, Node.js, and Firebase
- Managing CI/CD pipelines with GitHub Actions and Heroku for deployment to 3 concurrent platform targets
- Collaborating with a SCRUM team across 2 continents to rapidly ideate and iterate on the core product

USC One World Terrain Project - Undergrad Research Fellow   **August 2021 - Present**
- Developing a data augmentation tool using CUDA, Python, and CloudCompare to triple machine learning dataset coverage for 3D point cloud segmentation techniques
- Researching new advancements in segmentation techniques for large-scale terrain mapping with deep learning; to date, have found and presented 12 different academic publications to the team

USC QED Research Lab - Software Engineering Extern   **February 2021 - May 2021**
- Developed Multi-Modal Visualizer, a Python visualization tool for medical time-series data, in 5 weeks
- Interviewed 6 lab researchers and ensured the tool fulfilled their primary needs of data concurrency and legacy support
- Configured automated deployment in Docker and Kubernetes to remove the need for manual setup

Tiny Headed Kingdom - Freelance Full-Stack Developer   **July 2020 - January 2021**
- Designed Tiny Headed Game, a multiplayer game for the company's Holiday 2020 marketing campaign
- Deployed frontend and backend code with Node.js, GameMaker, AWS EC2, and Firebase
- Managed server CI/CD during the game's rollout; final product played by over 800 users

Involvement

Engineer, USC Rocket Propulsion Laboratory   **November 2021 - Present**
- Building authentication and inventory infrastructure with Java, TypeScript, and Google OAuth; used by over 300 members
- Supporting hands-on integration at semi-annual rocket launch campaigns in the Mojave Desert

Organizer and Instructor, HW Inc   **November 2018 - June 2021**
- Managed and organized Harvard-Westlake's 45-person annual entrepreneurship camp for 3 years
- Taught workshops on competitive landscapes, branding, and MVP development
- Designed and programmed an online social hub in 3 weeks during the Covid-19 pandemic, allowing over 100 participants and alumni to communicate through a multiplayer recreation of the school library
- Presented each year's progress to audiences of up to 300 people

Computer Science Mentor, Leaders United for Change   **March 2020-June 2021**
- Oversaw online Python tutoring sessions through Zoom for over 50 middle school students
- Wrote and taught a 6-week summer program about Python, HTML, and Machine Learning to 60 students

Skills

- Python, JavaScript/Typescript, C++, C#, Java
- React, NextJS, React Native, Node.js, ExpressJS, TailwindCSS, Storybook, OpenCV, TensorFlow, CUDA, Unity, GameMaker
- Linux, Git, Jira, AWS S3/EC2/Elastic Beanstalk, Jenkins, Firebase, MongoDB, GraphQL

Projects

- **Writus** – mobile word search game published on iOS; winner of HackSC 2022
- **FreehandVR** – marker-less VR hand-tracking prototype using C#, Python, and OpenCV
- **ReMotion** – 3D positional tracking software for AR game design using Python and OpenCV
- **Emotive** – Emotion-tracking plugin for games using React, Python, and TensorFlow
- **Markov Books** – procedural book extender using a Java implementation of Markov chains
- **MMOMaker** – open-source MMO game framework for GameMaker Studio 2
- **Willfarhat.com –** full-stack website hosted on Linux and built with NextJS / React, TypeScript, and Node.js
- **Coffeehouse** – WebRTC and JavaScript powered conference calling for music sharing and jam sessions
- **Inc View –** Node.js video calling web app to connect multiple computers into a geographic camera network