

# Forest Katsch

/\* Software Engineer \*/

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## Personal Projects

### Python Developer

Vertex Oven  
2020

- Prototyped, developed, and published a Blender 3D addon to help game artists add ambient occlusion to their models quickly and easily.
- Written in Python 3.7; interfaces with Blender's API to access 3D model information.
- Created promotional materials and wrote user documentation for the Blender Market store.

### Android Developer

Stackulator  
2017

- Prototyped, developed, and published a postfix calculator app for Android devices.
- Studied Material Design guidelines to improve the usability and style of the app.
- Published the app on the Google Play Store.

### Software Engineer

Indoc  
2016 - 2017

- Wrote a documentation extraction tool using JavaScript, designed for developers.
- Integrated custom tag logic in an off-the-shelf Markdown parser.
- Published the tool in the npm registry for others to use.

### Front-end Developer

F9R-Dev2D  
2016

- Developed and published a rocket landing game for the web.
- Implemented guidance, navigation, and control algorithms for automated flight.
- Integrated existing physics engine and added high-level aerodynamics simulation.

## Work Experience

### Software Engineer

WaterGuru, Inc.  
Apr. 2019 - Aug. 2019  
CONTRACTUAL

- Developed real-time data analysis tool with JavaScript, Python, and WebSockets for QA teams working on hardware manufacturing and assembly lines.
- Designed the product according to a specification, without access to production hardware or software.
- Rapidly added new functionality to the tool to conform to fluid requirements and worked with the manufacturing team to resolve issues.
- Added features to the previously-developed internal tool to improve, simplify, and streamline the workflow for users.
- Improved instructional material and reworked some flows to simplify the experience.

### Field Service Technician

WaterGuru, Inc.  
Aug. 2018 - Nov. 2018

- Developed, maintained, and distributed internal tools using React, JavaScript, Web Bluetooth, Parcel, and SCSS.
- Helped develop procedures and requirements for testing an app on iOS and Android.
- Primary member of field service team; maintained products installed at customers located throughout the Bay Area.
- Developed detailed data logging system to record incidents in the field for later review.

### 3D Artist

The New Atlantis  
Aug. 2018  
CONTRACTUAL

- Created realistic artwork based on a high-level napkin-sketch concept.
- Rapidly iterated on the artwork throughout the creative process based on feedback received from the editors.

### Product Design

PhaseSpace, Inc.  
2015

- Custom-designed a machined aluminum enclosure for a compact, programmable camera.
- Worked closely with the engineering team to determine optimal PCB layout, excellent heat dissipation, and interference-free mechanical fit.

## Skills

Advanced command-line skills on both macOS and Linux, including remote server maintenance.

Excellent with: JavaScript (ES6), node.js, C/C++, Python 2/3, CSS3, SCSS, Linux/UNIX (includes ssh setup, scripting, systemd service creation, and more), and HTML5 (including canvas, WebSockets, Web Bluetooth, and more).

Familiar with: bash/zsh scripting, makefiles, NGINX, CMake, Meson, MongoDB, PostgreSQL/SQL queries, git, clang, gcc, Swift, C++, Java, React, Svelte, Parcel, Webpack, WebGL, OpenGL, and TeX.

Creative/Design: Excellent with Blender 3D and the Cycles and Eevee render engines; familiar with Sketch and Unity 3D.