Forest Katsch
/* Software Engineer */

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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, simply, 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.

Personal Projects

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.

Front-end Developer
openScope
2014

– Designed and developed an air traffic control simulator with JavaScript and CSS.
– Created high-level aircraft simulation and guidance algorithms.
– Digitized the layouts of many airports for use in the simulator.

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.