James Keveren

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Summary

A personable, passionate and creative person with knowledge of many engineering disciplines and manufacturing techniques. I've gained most of my commercial experience during my Software Engineering career but Mechanical, Electrical, Electronic Engineering and Physics have been a huge passion of mine for my entire life as is reflected by my personal projects below. During my experience as a Software Engineer I gained many trasnferrable skills around teamwork, project planning and project management. From this experience I have become very familliar with the design, implementation, and iteration process.

Skills and Technology

CAD/CAM

SolidWorks, Fusion 360, OpenScad, Cura, Chitubox, PrusaSlicer, Keyshot, Blender

Mechanical, Electrical, and Electronic Engineering

Welding (TIG, MIG), 3D Printing (FDM, MSLA), Solar, HVAC, Classical Mechanics, General metalworking

Software Engineering

Golang, JavaScript, Nodejs, NPM, C#, .Net, Entity, Framework, MSSQL, C++, Git, Google Cloud, Firebase, AWS, Plesk, MongoDB, Mercurial, TDD, Regexp, Magick++, Mocha, Express, Gulp, Pug, HTML, CSS, WebSockets, JSON, REST

Linux

Arch, Debian, CentOS, Systemd, Haproxy, Nginx, Plesk, dm-crypt, Xinetd, Rsync, Cage, FFmpeg, ImageMagick, Raspberry pi

Networking

DNS, TLS/SSL, HTTP, Let's Encrypt, Certbot, Opnsense, Unifi, PoE, Fibre Channel

Other

Dell iDrac, LTO, Desktop/Server Hardware, MailEnable, Microsoft 365, Google Ads, Plesk

Experience

Komi Celebrity fan inteligence platform — Mar 2022 - Jun 2022
Software Engineer & Scrum Master

- Joined with four other engineers to form the new UK based engineering team.
- Became Scrum Master, after just one month, alongside being a Software Engineer. Resposibilities included: ensuring the teams capacity is best utilised towards the sprint goal; running each sprint and all scrum meetings; and cultivating good teamwork and communication. This role was new to me and involved a lot of intuition and learning but I received many compliments on my work.
- Worked extensively on the complex, business critical, and client facing "pre-saves" feature.

Pharmagraph Manufacturer of environmental monitoring systems — Jan 2020
CAD Consultant

- Created models and technical drawings in Fusion 360 for manufacture.
- This was a small peice of work but was well recieved.

IFL Management Umbrella company provider — Mar 2017 - Feb 2022
Software Engineer

- Rewrote a QuickBooks data importer to significantly optimise processing and deduplication of financial data using in memory indexing in JavaScript.
- Worked in a small team to build an online quote and sales lead system using .Net and SendGrid.
- Managed servers, hosting of various web apps, DNS, and email.
- Built a tool for backing up office machines to OneDrive using Golang.

Pro-Quest Resourcing Recruitment company — Jun 2018 - Jun 2021
Software Engineer

- Worked in a two person team responsible for automating recruitment lead generation. We built a complex data pipeline to regularly import vacancies from various sources. Built with Node.js, .Net, SendGrid and microservices hosted on Google Cloud. This provided Pro-Quest with all of it's vacancy leads. Vacancies were normalized, filtered and deduplicated (around 20,000 - 30,000 per day). Relevant email addresses were found using a number of methods including bing searching, scraping, third party email providers and a data entry web app. Emails were then sent out automatically to prospective employers. We accrued a database of hundreds of thousands of vacancies, companies and contacts in order to manage email unsubscriptions and to access previously found email addresses.

- Built a job listing web app, using vanilla JavaScript, to attract candidates to match with the vacancies of the system above. This was an SPA with background loading for a fast UX.
- Built a caching proxy for a slow third party recruitment API (JobAdder). Stored responses in Google's Firestore.
- This company is a partner with IFLManagement

Personal Projects

I love talking about these projects and the challenges involved so ask me in the interview if you feel it's relevant.

Solar Powered Mobility Scooter

Electrical Solar james.keve.ren/gallery/IMG_20220701_141113.jpg

Reimplemented the electrical system of a mobility scooter to include a solar charge system. Modifications also included increasing top spead by a factor of 2.5. The project had unique challenges yet was completed solely using off the shelf components for swift execution.

Steel Workbench

Metalworking youtu.be/0LhPWrXGbMg

210kg workbench made entirely from steel for heat resistance, durability, and to provide a surface to weld on. This was designed and built to be constructed with my limited tools and without the use of welding. As a result this was assembled using rivnuts, bolts and folding the ends of steel box section.

650A Power Supply

Electrical TIG Welding Metalworking youtu.be/G3t07j_KhL4

Power supply capable of providing 8kW of power for short bursts or 3kW continuous at 12-96VDC. Created by aggreagating the output of eight, 1kW server power supplies is series or parallel to achieve a range of voltages and current ratings. All powered from a custom, TIG welded, PDU and modifed to have floating outputs.

Holonomic Wheel

SolidWorks https://grabcad.com/library/holonomic-wheel-1

Similar to a mechanum wheel, this is designed to allow a vehicle to move in any direction with as few as three wheels. This was designed to be manufactured using only only basic metalworking equipment and 3D printing.

Road Bike Frameset

SolidWorks https://grabcad.com/library/road-bike-5

Frame and forks for a road bike, optimised to resist structural torsion forces created by pedaling at high torque. This project was limited by my ability to manufacture at the time.

Other CAD Projects

SolidWorks Fusion 360 grabcad.com/james.keveren-1/models

A series of smaller projects that I created for fun. My models are usually somewhat parametric and are made with feature stability in mind. Many of these models involve assembies with medium complexity.

3D Printing Projects

3D Printing CAD Software CAM Software thingiverse.com/jkeveren/designs

I have many small 3D printing projects that involved, design, printing and iteration. Many projects were objects designed to work with exising objects for example my Samsung Galaxy S4 Case. This required carful metrology and iteration to perfect.

Home Controller

Node.js github.com/jkeveren/home

Used to control various lights and appliances around my home using Sonoff smart switches via their HTTP API.

Workbench Parts Calculator

JavaScript github.com/jkeveren/workbench-parts-helper

When designing a steel workbench I used this script to calculate quantities of materials and components to purchase from multiple suppliers.

MassDraw

JavaScript Node.js Socket.io github.com/jkeveren/massdraw

Allows multiple people to draw on a shared whiteboard in realtime using Socket.io and JavaScript's canvas API.

For more projects check out these links:

- github.com/jkeveren
- grabcad.com/james.keveren-1
- thingiverse.com/jkeveren