

James Anthony Stewart



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Technologist with a background in software development + devops and an increasing focus on technical leadership and product development. Maker and Open Source proponent with a life-long passion for technology. Proven experience across a wide range of industries and specialising in Linux, Python, IoT and Cloud.

Employment

Mason Development Group - NSW Central Coast, Australia

Technology Team Lead

01/2022 - 01/2023

Leader of a nascent team developing a Building Management System (BMS) for deployment in light industrial units.

- Introduced user story mapping to distill nebulous product concepts into an achievable MVP.
- Led development of the Mason access control system comprised of:
 - Proprietary door controller: hardware developed off-shore and software developed in-house.
 - Access management service built in Python using [FastAPI](#).
 - Frontend components built in Javascript with [Lit](#).
- Architected a foundational BMS built on [Home Assistant](#) and incorporating the Mason access control system.
- From nothing to production systems installed in customer premises in < 9 months.

NEV Power - NSW Central Coast, Australia

Consulting System Architect & Engineer

05/2021 - 11/2021

Consultant responsible for the architecture and IT engineering of the \$4.73m ARENA-funded [NEV Smart Grid](#) project.

- Applied agile concepts and user story mapping to build a shared understanding amongst stakeholders.
- Architected and led development of the Narara Ecovillage Smart Grid built around a private LoRaWAN network:
 - Modbus/LoRaWAN bridges to collect meter/inverter data and facilitate inverter control.
 - [The Things Stack](#) to bridge LoRaWAN and IP networks.
 - Modbus RTU/IP gateways to collect BESS, grid controller and site meter data.
 - [Vottron](#) with custom Agents and Drivers as core smart grid management system.
 - TimescaleDB and Grafana for time-series data storage and local visualisation.
 - AWS Lightsail for off-site data replication and visualisation.

Honesty Box - Sydney, Australia

Head of Technology 01/2019 - 01/2021 Head of a team responsible for a fleet of 1500+ IoT devices and associated SaaS services used by [Choice](#) and [NBNC](#) to monitor the Internet connection quality of Australian homes and business.

- Introduced kanban board and agile methodologies + processes to Engineering team.
- Provided product and technical direction in response to evolving business needs.
- Led ongoing architecture and development of core services:
 - Metric collection devices built on ASUS Tinkerboard SBCs running a custom Python agent.
 - Metric ingestion service built upon AWS IoT, Lambda and DynamoDB.
 - Metric storage service built upon AWS Kinesis, Lambda, RDS and S3.
 - Device management service built on Django.
- Championed the development of the Open Source [honestybox-measurement](#) library.
- Introduced CI/CD using AWS CodeBuild/CodePipeline/CodeDeploy and Github Actions.

Enstaved - NSW Central Coast, Australia

Co-founder / CEO / Tech Lead 04/2017 - present Co-founder responsible for the strategy, technology and manufacturing processes of a growing niche product startup.

- Raised >AU\$150k via crowdfunding campaigns on [Kickstarter](#) and [IndieGoGo](#).
- Established an off-shore manufacturing and 3rd-party logistics pipeline for worldwide distribution.
- Developed early-stage MVP tooling:
 - E-commerce store using a custom fork of [Saleor](#) (e-commerce platform built with Python + Django).
 - Service to render dynamic custom product images in near-real-time using Flask and OpenSCAD.
 - Production process based on Fused Deposition Modelling (3D Printing) to bring custom, locally manufactured physical products to market rapidly and cost-effectively.

Availery - NSW Central Coast, Australia

Consulting DevOps Engineer 01/2019 - 03/2019 Consultant responsible for the migration of talent-matching SaaS [isaptalent](#) to Amazon Web Services.

- Migrated web services from legacy single-VM hosting to AWS utilising EC2, RDS, ELB, S3 and EFS.
- Created automated build pipelines using CodeBuild/CodePipeline/CodeDeploy.
- Orchestrated infrastructure configuration and deployment using Terraform and Ansible.

Thermeon - Remote

DevOps Engineer 08/2015 - 12/2018 Member of a geographically distributed DevOps team administering industry-leading automotive rental SaaS [CARS+](#).

- Orchestrated worldwide virtual host configuration management using Ansible and Puppet.
- Migrated services from legacy KVM hosting to Google Cloud Platform (GCP) orchestrated with Terraform.
- Designed and developed internal services using Docker containers deployed to Kubernetes (GKE).
- Implemented metric/log collection and analysis using Graphite/Grafana and Elasticsearch/Logstash/Kibana.

iCrew - Remote

Technical Partner 04/2016 - 06/2017 Early-stage partner responsible for development and hosting of a SaaS to manage sub-contracted event staff.

- Introduced founder and project manager to agile development

- process based on kanban.
- Developed dynamic RESTful API backend using [Eve](#) (Python + Flask + MongoDB).
- Developed single-page frontend application using Vue.js + Vuex.

Optiver Asia Pacific - Sydney, Australia

Tools Developer 09/2013 - 07/2015	Full stack development role creating internal tools used by various departments across the business.
Monitoring Engineer 04/2010 - 09/2013	DevOps role using Open Source tools and custom middleware to monitor critical high frequency trading systems.

Travelling - London to Sydney

Nomad 06/2009 - 02/2010	An epic journey across the planet from London to Sydney without catching planes. <i>(Ok there was a little flight from Bali to Perth but we took the train onward to Sydney).</i>
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Beam.tv/The Mill - London, United Kingdom

Systems Manager 03/2005 - 06/2009	Senior Systems Administration role. Responsible for junior staff and all operational aspects of a pioneering video-sharing SaaS used by the advertising industry.
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InciteMVNE - London, United Kingdom

Operations Manager 10/2003 - 02/2005	Systems Administration role responsible for all operational aspects of a mobile content delivery system.
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Travelling - Europe

Nomad 05/2003 - 10/2003	Backpacking around Europe embracing new cultures, attending music festivals and acquiring life experience. Settled in London when it became too cold for camping.
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Professional Golfers Association - Sydney, Australia

IT Administrator 02/2002 - 05/2003	Responsible for the PGA's nationwide IT infrastructure. Introduced Open Source solutions to save this member-based organisation significant licensing costs.
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Access Gaming Systems - Sydney, Australia

Systems Administrator 12/1999 - 02/2002	Member of a 4-person team responsible for administering company network of 150 users.
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Volunteering

SparkCC 2014 - present	President and co-founder of SparkCC : a makerspace located on the Central Coast of NSW, Australia. Empowering people to make anything that they can imagine.
Primary Ethics 2016 - present	Teaching primary school children to listen empathetically, disagree respectfully, build on each other's ideas and use evidence and reasoning to make decisions.

Projects

Tosr0x	Tosr0x is a Python module for communicating with 'TOSR0x' USB relay controllers made by TinySine .
OpenGB	OpenGB is a 3D printer control interface. Backend written in asynchronous Python using Tornado and frontend in Vue.js.

Presentations

Controlling a 3D Printer with Python

08/2016

PyCon Australia Melbourne ([video](#))

Qualifications

1998-2001

University of Technology, Sydney

Bachelor of Science: Computing Science (Honours 2nd Class).
Sub-major in Computer Graphics.

2012

EXIN

ITIL v3 Foundation

2013

Red Hat, Inc

Red Hat Certified Systems Administrator (RHCSA)