

# 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.

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## **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.

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## **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.

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## **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.

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## **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.
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## **Optiver Asia Pacific - Sydney, Australia**

**Tools Developer**  
09/2013 - 07/2015

Member of a software development team delivering internal tools to various departments across the business.

- Developed numerous microservices built on Flask and Django.
- Designed RESTful APIs with backends built on PostgreSQL, Redis and MongoDB.
- Developed Python libraries to simplify interaction with internal services.
- Frontend development using HTML, Bootstrap, CSS and Javascript/JQuery.

**Monitoring Engineer**  
04/2010 - 09/2013

DevOps role responsible for the monitoring of highly critical financial trading systems.

- Replaced HP monitoring suite with Zenoss Core (Open Source) saving ~\$200k per annum.
  - Developed Python middleware to integrate Zenoss with Puppet, AD, Service Manager and ServiceNow.
  - Implemented metric collection and analysis using Graphite/Grafana, StatsD, Django and Apache Flume.
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## **Travelling - London to Sydney**

**Nomad**  
06/2009 - 02/2010

An epic journey across the planet from London to Sydney without catching planes. Western Europe, the Baltics, Scandinavia, Eastern Europe, the Middle East (via Turkey, Iran and Pakistan), India, Nepal, Tibet, China and home through South-East Asia.

*(Ok so there was one little flight from Bali to Perth but we took the train onward to Sydney).*

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## **Beam.tv/The Mill - London, United Kingdom**

**Systems Manager**  
03/2005 - 06/2009

Senior Systems Administration role. Responsible for junior sysadmin and all operational aspects of a video-sharing SaaS used by the advertising industry and hosted across 3 internationally-distributed data centres.

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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 built on J2EE/RedHat/Oracle.

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## **Travelling - Europe**

**Nomad**  
05/2003 - 10/2003

Backpacking around Europe embracing new cultures, attending music festivals and acquiring life experience. Eventually settled in London when money ran low and it became too cold for camping.

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## **Professional Golfers Association of Australia - Sydney, Australia**

**IT Administrator**  
02/2002 - 05/2003

Responsible for all aspects of the PGA's nationwide IT infrastructure, (50 users throughout national head office and 4 state offices). Introduced Open Source solutions to save this member-based organisation significant ongoing 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 company network of 150 users running Win 98/NT/2k and servers running Redhat Linux, Solaris and Win NT/2K Server.

## Volunteering

SparkCC  
2014 - present

President and co-founder of SparkCC: a makerspace located on the Central Coast of New South Wales, Australia. Empowering Central Coast residents 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 written in Python. Printer functions are exposed via a websocket API built on Tornado and called either programatically or by an included touchscreen GUI written 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)

## References

Sandra Davy

*"I would work with James again in a heart-beat. One of the nicest software engineers/tech people I've had the pleasure of working with in years.*

*Super talented, calm and thoughtful, solution-oriented, utterly reliable and a person of strength and integrity. With James as the Head of Tech, there wasn't a day that went by where I didn't feel we were in safe, reliable yet also totally innovative hands.*

Matt Tett

*"James is truly an all rounder.*

*Grounded in reality, both timeframes and budgets, ensuring deliverables are reliably produced across the team.*

*Great communicator articulating complex technical tasks and features to a diverse audience from the lay person to the highly technical.*

*Innovative thinking outside the box to deliver quality product, roadmaps and collaboration using the latest tools.*

*Patient and calm under pressure.*

*Bottom line is that I wouldn't hesitate to personally recommend working with James. And I hope to work with him again in the future.*

AJ Moore

*"James has been fundamental in turning my tech start-up plans and ideas into reality over the last few years. With a unique mix of tech-savvy, business acumen & people skills: James has been able to translate an evolving vision into a sound technical strategy and innovative digital product. Equal parts agile, collaborative, pragmatic and creative; James crafted clear enabling processes, secure technical environments and has been an invaluable source of solutions and tech wizardry. It's an added bonus he's also one of the most genuine and easy-to-work with humans in the industry. Highly recommended."*

Additional references available on [LinkedIn](#).