

# James Anthony Stewart



[james@amorphitec.io](mailto:james@amorphitec.io) | +61 4666 53513 | [Twitter](#) | [Mastodon](#) | [GitHub](#) | [LinkedIn](#)

Technologist with a background in software development + devops and a recent focus on technical leadership and product development. Maker and Open Source proponent with a life-long passion for technology. Specialist 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** Consultant responsible for the architecture and IT engineering of the \$4.73m ARENA-funded [NEV Smart Grid](#) project.

04/2021 - 11/2021

- 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.
  - [Volttron](#) 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** Head of a team responsible for a fleet of 1500+ IoT devices and associated

03/2019 - 02/2021

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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## **Availery - NSW Central Coast, Australia**

**Consulting DevOps Engineer**

01/2019 - 04/2019

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 AWS CodeBuild/CodePipeline/CodeDeploy.
  - Orchestrated infrastructure configuration and deployment using Terraform and Ansible.
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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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## **Thermeon - Remote**

**DevOps Engineer**

08/2015 - 12/2018

Member of a geographically distributed DevOps team administering industry-leading automotive rental SaaS [CARS+](#).

- Migrated services from legacy hosting to GCP orchestrated with Terraform, Ansible and Puppet.
  - 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 DevOps for a SaaS to manage sub-contracted event staff.

- Introduced founder and project manager to agile development process based on kanban.
- Developed SaaS comprised of RESTful API backend using [Eve](#) and frontend using Vue.js/Vuex.

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## Optiver Asia Pacific - Sydney, Australia

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

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

<b>Systems Manager</b> 03/2005 - 06/2009	Senior Systems Administration role. Responsible for junior staff and operation of a pioneering video SaaS used by the advertising industry.
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## InciteMVNE - London, United Kingdom

<b>Operations Manager</b> 10/2003 - 02/2005	Systems Administration role responsible for operation of a pioneering mobile content delivery system used by premier league football clubs.
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## Professional Golfers Association - Sydney, Australia

<b>IT Administrator</b> 02/2002 - 05/2003	Responsible for the PGA's nationwide IT infrastructure. Introduced Open Source solutions to eliminate significant ongoing licensing costs.
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## Access Gaming Systems - Sydney, Australia

<b>Systems Administrator</b> 12/1999 - 02/2002	Member of a service desk team responsible for handling support calls and administering company network of 150 users.
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## Volunteering

<b>SparkCC</b> 2014 - present	President and co-founder of <b>SparkCC</b> : a makerspace located on the Central Coast of NSW, Australia. Empowering people to make anything that they can imagine.
<b>Primary Ethics</b> 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.

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## Projects

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

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## Presentations

### Controlling a 3D Printer with Python

08/2016	PyCon Australia Melbourne ( <a href="#">video</a> )
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## Qualifications

1998-2001	<b>University of Technology, Sydney</b> Bachelor of Science: Computing Science (Honours 2nd Class). <i>Sub-major in Computer Graphics.</i>
2012	<b>EXIN</b> ITIL v3 Foundation
2013	<b>Red Hat, Inc</b> Red Hat Certified Systems Administrator (RHCSA)