James Anthony Stewart

james@amorphitec.io | +61 4666 53513 | Twitter | Mastodon | GitHub | LinkedIn

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 achieveable MVP.
- Led development of the Mason access control system comprised of:
  - Proprietary door controller: hardware developed off-shore and software developed in-house.
  - Access mangement 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.
  - Volttron with custom Agents and Drivers as core smart grid management system.
  - TimesscaleDB 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 NBNCo 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 mananagement 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 DevOps for 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.

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.

InciteMVNE - London, United Kingdom

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

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.

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.

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)