Jack **McKew**

SENIOR SOFTWARE ENGINEER · TECHNICAL WRITER · DATA ENGINEER

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Work Experience

Deckee
2020 - Present

SENIOR FULL STACK SOFTWARE ENGINEER
Full Time

- Responsible for delivering full stack data analytics, visualisation and automation of waterway & app usage.
- Delivered key features for keeping boaters safe on the water including: weather alerts, safety information through map tile servers, automatic on the water detection and log on log off.
- Designed, developed and delivered a search and rescue platform solution with a successful real world trial in Western Australia.
- Pioneered new methodologies to capture and analyse user behaviour through phone sensors to guide government bodies to keep their communities informed on the water.

Galah Cyber
2024 - Present

TECHNICAL WRITER
Part Time

- Responsible for compiling, editing and delivering technical cybersecurity assessment reports to clients.
- Accountable for documenting vulnerabilities and remediations in clear, concise manner

Cyberlytica
2020 - Present

FOUNDER & PRINCIPAL CONSULTANT
Part Time

- Freelance digital services company specialising in data services.
- Services include data analytics, visualisation & automation.
- Full stack development, packaging and distribution of solutions

Arrowtail
2022

SENIOR SOFTWARE ENGINEER
Part Time

- Responsible for integrating Arrowtail's explosive delivery capture app with on-site inventory management.

AECOM
2017 - 2020

ELECTRICAL / SOFTWARE ENGINEER
Full Time

- Development of scientific computing software for environmental data sets.
- Saved approximately 900 working hours through automation.
- Pioneered and lead an Australia wide Microsoft Excel training session.
- Lighting, reticulation, switchboard, lightning protection system, PLC network design.

Hunter H2O
2016 - 2018

UNDERGRADUATE CONTROLS ENGINEER
Part Time

- Responsible for developing control & SCADA systems for water and wastewater treatment plants during my studies.

Skills

DevOps	AWS, GCP, Azure, Github Actions, Docker, Kubernetes, AWS CDK, Cloudformation
Back-end	Express, Django, REST API, Swagger, RabbitMQ, PostgreSQL
Front-end	Redux, React, HTML5, SASS, Cordova, Capacitor
Data	PostgreSQL, Pandas, SKLearn, PyTorch, Apache Spark, AWS Glue, Numpy
Programming	SQL, NoSQL, Node.js, Python, LaTeX, VBA, C, C++
Languages	English (native), Spanish (elementary), Italian (elementary)

Projects

Deckee Analytics

LEAD ENGINEER

- Designed, developed and delivered a full stack interactive visualisation platform with Auth0.
- Built the data collection, annotation, storage and query capabilities to capture events from user devices, capturing billions of data points per year.
- Pioneered anonymisation techniques to protect user privacy for sensitive information.
- Strategised and implemented new methodologies for communicating data analysis to an industry.
- Responsible for data scraping, natural language processing, sentiment analysis and mass translation.

On the water detection

LEAD ENGINEER

- Developed and implemented a system to identify geolocations to be on the water, handling 100 locations per second.
- Automatically enabled safety features including weather alerts, sharing location with safety contacts, logging on with marine rescue.
- Designed to directly contribute to analytics product offerings through data annotation.

Stock Inventory API Integration

LEAD ENGINEER

- Delivered an asynchronous API integration using event driven architecture to integrate with on-site inventory management software.
- Documented technical aspects, and on-boarded developers to continue the development of the API integration.

Air Quality Toolkit

DATA SCIENTIST

- Developed, packaged and distributed software to automate tasks reducing a week long task to seconds.
- Developed re-sampling tooling such that high frequency atmospheric data can be used in models.
- Built interactive data visualisation tooling to communicate data with clients.

Vulnerability Mapping Tool

DATA SCIENTIST

- Automated GIS analysis to model vulnerability of communities to natural disasters, saving time and enhancing repeatability.
- Compiled various sources of statistical and functional information to model vulnerability.
- Developed interactive visualisations to assist data driven decision making.

University of Newcastle - Q Building

ELECTRICAL ENGINEER

- Delivered electrical designs & drafting work in a multidisciplinary team for the new Q building in the Honeysuckle campus.

Writing

The Geography of Covid-19 Spread in Italy Using Social Media and Geospatial Data Analytics _2021_

CO-WRITER

- Published in The International Journal of Intelligence, Security, and Public Affairs.
- Responsible for data scraping, natural language processing, sentiment analysis and mass translation.

Expert Opinion for NSW Litigation Case _2021_

WRITER

- Engaged & delivered an expert opinion for a software litigation case under the NSW court.

Education

University of Newcastle _2015 - 2018_

BACHELOR OF ELECTRICAL ENGINEERING (WITH HONOURS)

- Completed a thesis on an in home appliance scheduler to optimise energy consumption & costs.

Extracurricular Activity

Hunter Data Analytics _2019 - 2022_

ORGANISER / SPEAKER

- Monthly meetup in Newcastle Australia for data enthusiasts.

Pandas Alive _2020 - Present_

CREATOR & MAINTAINER

- Create stunning, animated visualisations with Pandas & Matplotlib in one line of code.
- Over 15,000 downloads & 120 stars on Github in the first 4 weeks of release.

Pyinstaller Actions Windows / Linux _2020 - Present_

CREATOR & MAINTAINER

- Github Action with over 150 stars for building executables from Python code with PyInstaller.

Presentation

Pycon 2020 _2020_

PRESENTER FOR GITHUB ACTIONS & PYTHON

- Introduced Github Actions and how to integrate this with Python workflows.