

Taylor Manderson

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Professional Experience

Max Kelsen

Software Engineer (Data, Infrastructure, DevOps) Oct 2019–May 2020

- Built, deployed, and maintained production Machine Learning workloads (streaming, on-demand, batch) on both Kubernetes and managed services on GCP and AWS
- Client-facing consulting on machine learning, software development, and data engineering projects, including projects as primary engineer

Wattwatchers

Consulting Software Developer Dec 2018–Jul 2019

- Time-series PostgreSQL query and schema optimisation yielding a 70% read/30% write performance improvement
- Implementing asynchronous concurrent patterns in a Python socket server yielding 1.5x throughput increase

Polymathian

Software Developer Dec 2015–Mar 2019

- Diverse role including full stack web dev, system administration/DevOps, data science, client-facing consulting
- Solely responsible for company-wide transition to deployment with Docker
- Developed a transparent API for running tasks asynchronously in a distributed and concurrent environment
- One of two developers on rearchitecture of core internal tooling to microservices

University of Queensland

Tutor, Introduction to Software Engineering Feb–Nov 2015

- Modified Python's `unittest` to provide student-friendly test results and automated marking features
- Awarded a prize due to high performance evaluation from students

Projects

UQ Computing Society Projects and Infrastructure

Development, Operations, Python, Ruby, JavaScript, \LaTeX 2015–2020

- Developed and maintained 6 public-facing, 1 infrastructure project for UQCS including build and deployment automation
- Sole developer on three Python/Flask based projects until 2018
- Lead contributor to development of a Python slack bot framework
- Still contribute to maintenance

Stable Matching for Dynamic Ride-Sharing Systems

Development, Mathematics, Python, Operations Research 2017

- Took an existing Operations Research paper and successfully increased performance more than 3x
- Improved both mathematical formulation and software characteristics
- Included linear programming, integer programming, dynamic programming, mathematical problem decomposition

mypy Type Checker

Development, Python 2017

- Open source project: official type-checker for Python
- One of two contributors to metaclass type-checking capabilities

Education

University of Queensland

BE (Software)/BS (Mathematics)

2014–2019

- Software focus in distributed and concurrent programming, program verification
- Mathematics focus in operations research and abstract algebra
- Honours thesis: "Proving Consistency of an Abstract Algebra for Verification of Concurrent Programs"
- President of UQ Computing Society 2015–2017
- Awarded the "ICT Excellence Scholarship" 2014

Skills

- Python
- TypeScript
- C/C++
- Linux/Unix
- Build systems
- Cloud infrastructure
- System administration
- VCS (Git/SVN/Mercurial)
- Configuration management
- Operations research
- Program verification
- Abstract algebra
- Isabelle/HOL
- Haskell
- JavaScript
- Java
- Kubernetes
- CI/CD

Presentations

PyCon Australia 2017:

Gradual Typing in Python

PyCon Australia 2018:

Task Queues: A Celery Story

Certifications

Google Cloud Platform:

Professional Data Engineer

Amazon Web Services:

Business Professional

References available on request