

LEWIS SMITH

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EXPERIENCE

Maxwell Plus

Lead Machine Learning Engineer

Brisbane, Qld
July 2020 - Present

- Implemented a model which used Gaussian Processes to interpolate historical blood markers to be used in a state-of-the-art CNN + LSTM model to predict the likelihood of a patient developing Prostate cancer. Paper accepted <https://pubmed.ncbi.nlm.nih.gov/34920976/> (Python, Tensorflow)
- Developed a novel optimisation technique for combined learning of different 3D MRI segmentation labels achieving state-of-the-art anatomical segmentation of the prostate. Poster accepted in APCC 21 shorturl.at/bvwxP (Python, Tensorflow)
- Implemented a model to segment and classify cancerous lesions within MRI images using an attention based 3D Unet (Python, Tensorflow)
- Responsible for the hiring and managing of the data science team

Machine Learning Engineer

Jan 2018 - July 2020

- Created a cost optimised distributed deep learning training system using on-demand instances reducing costs training costs by 70% (AWS, K8s)
- Created a pipeline to process and segment terabytes of 3D medical imaging data (Python, Apache Beam)
- Built and maintained a series of asynchronous deep learning prediction end points (Python, Django, Celery, Docker)
- Standardized Tensorflow model creation and serving development pipeline by creating templates, tests and code standard documentation (Python, Bash)
- Assisted in the development and testing of a patient management platform (React, Typescript, JS)

SAP Innovation Center

Software Engineer - Intern

Brisbane, Qld
Mar 2016 - Dec 2017

- Generating realistic multi-million row data sets for usage in product demonstrations - banking transaction analytics (SQL, Python)
- Created back-end unit tests for data analytics application (JavaScript)
- Clustering of time-series data to group similar customers together based on their transactional behavior (SQL)
- Implemented a model to predict how many days until a customer will churn from a bank based on transaction data using a Recurrent Neural Network (Python, Tensorflow, SQL)
- Optimising SQL query plans and table partitioning to improve back-end performance (SQL)

EDUCATION

University of Queensland

Bachelor of Engineering (Software Engineering)

Brisbane, Qld
Graduated 2017

SKILLS

Programming Languages:	Python, JavaScript (ES6), React/Redux, Typescript, HTML5, CSS3, Bash
Technologies:	Docker, Ansible, Kubernetes, Git, Apache Beam, AWS, Google Cloud, Cypress

PROJECTS

The Boxing Book React, Typescript

www.theboxingbook.com

Amateur boxing database officially used by Boxing Australia for fighter tracking and match-making

Distributed Tensorflow Project Template Python, Bash

github.com/leewwiiss/Distributed-Tensorflow-Template

A template for creating pragmatic Tensorflow models with Python coding best practices in mind

AWARDS

Most Innovative Business Idea

Startup Weekend for Health

Wearable technology for babies to track and analyse health metrics to improve parents/babies quality of life

Brisbane, Qld
Mar, 2016