



# JOSEPH HODGES

Software Engineer | AI/ML | DevOps | Python

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USA

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## STRENGTHS

AI / ML Algorithms

Big Data

Data Science

Docker & VM

CI/CD

Pattern Recognition

Data Sets

Software Design

Agile

RHEL

Deep Learning

Fast learner

Persistence

Prioritisation

Problem Solving

Reliable

Communication skills

Seek out Feedback

Teamwork

Goal Oriented

## LEARNING

Mobile Dev

Data Engineering

Networking

Computer Vision

Data Mining

Cloud Computing

Generative AI

Edge Computing

Large Language Models

High Performance Computing

Natural Language Processing

## LANGUAGES

Proficient:

Python | Bash | Java

Experienced:

Ansible | SQL | C++ | C#

Familiar:

Go | Docker | Ruby | F# |

JS/TS

Frameworks:

Flutter | React | .NET

## ABOUT ME

*New Zealand trained Machine Learning Engineer with significant experience in Software Development moving to to the USA on a Work and Travel Visa. I am highly motivated and eager to learn as much as possible about your software practices while sharing some of ours.*

## EXPERIENCE

### Machine Learning Engineer | StayInFront

08 2023 - Now

Auckland, NZ

- Research and Development of new Machine Learning projects from inception to testing and delivery.
- Maintenance and ongoing development in existing products.
- translating business requirements.
- worked with Reinforcement learning as well as more traditional ML algorithms across Computer Vision and more general data driven solutions.
- Key Projects involved Causal inference in Data, Computer Vision & Pattern Recognition in Data

### Software Developer | New Zealand Stock Exchange (NZX)

11 2021 - 07 2023

Wellington, NZ

- Designed, Implemented and Supported Automated Deployment scripts in python and ansible for applications and frameworks
- Developed CI/CD pipelines with Github Actions to ensure code quality organisation wide.
- Re-architect, Deployment and Maintenance of Tier One Legacy Systems across the organisation and stack.
- Oracle and Postgres Database Migration and deployment
- Assisted in training and upskilling new graduates

### Junior Developer | Qontro

02 2021 - 11 2021

Auckland, NZ

- Hired to redesign their helpdesk (migrating to a freshdesk system), which involved writing an internal API in python as well as CLI to interact with it.
- Through personnel changes I started managing the project and successfully saw this it through to handover.
- Briefed new project managers on progress, as well as giving regular updates to the wider company and CEO.
- Wrote Python scripts to Interface with freshdesk Enterprise software and automate calls to their RESTful API.
- Gained familiarity with Agile methodologies, Jira, and Confluence

# EDUCATION

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## BE (Hons) Software Engineering | [Victoria University of Wellington](#)

📅 2019 – 2023

📍 Wellington, NZ

- First Class Honours
  - Specialising in AI/ML
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# PROJECTS

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## Genetic Algorithms for Community Detection in Social Networks | |

- Investigated existing Community detection algorithms, and identified issues
  - Developed and Implemented a new algorithm using GA utilizing Edien Vector centrality and local search to accurately and efficiently identify communities in social networks
  - Tested across large datasets and published results
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## Exploratory Data Analysis and Manipulation | |

- Business and Data Understanding with Seaborn
  - Data Science
  - ML model Design and Implementation with Scikit-Learn
  - Model Evaluation and Improvement
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## Image Classification and Pattern Recognition using CNN |

- Data Analysis and Augmentation with PyTorch
  - Hyper Parameter Tuning
  - Building Deep Learning Algorithms with Kieras and TensorFlow
  - Transfer and Ensemble Learning
  - Evaluation and Reporting
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## Evolutionary Algorithms for Optimization, Computer Vision, and Machine Learning | |

- Cooperative Co-evolution Genetic Programming
  - Estimation of Distribution Algorithm
  - Evolution Strategies for Training Neural Networks
  - Evolutionary Programming and Differential Evolution Algorithms
  - Genetic Programming for Image Classification
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## Evolutionary Computing for Optimization Problems | |

- used GA to solve a basic Knapsack problem and feature selection
- used GP with symbolic regression to solve the Rosenbrock and Griewank Problems
- Used Particle Swarm Optimisation and NSGA-II for feature selection

Checkout portfolio linked at the top for more info

# OTHER EXPERIENCE

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## ECS Outreach programme | [Victoria University of Wellington](#)

📅 03 2020 – 11 2021

📍 Wellington, NZ

- Represented the Engineering faculty at events around Wellington
  - Ran lunchtime code club at local primary & intermediate school.
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Outside of work I enjoy keeping fit and keeping active with whether thats training in a gym, on a rock climbing wall, or on the track. Also interested in music and spending time with friends - especially at the same time.