

Alexander Rossa

Senior Software Engineer

Contact: alexanderrossa@gmail.com

Tel: +447491 935 989

Portfolio: www.alexan.red

Experience

Senior Software Engineer @ Zynstra, NCR

MAR 2020 - JUN 2022 // Bath, UK

- Led a team of 5 developers working in the domains of high availability, VM management, cluster management and containerisation
- Took care of **people and project management**, including **architectural design** and **release planning**
- Our team has **consistently delivered highly complicated features** - evidenced by numerous R&D awards and successful releases
- Worked on improving internal company processes, such as by **creating bots that managed our GitLab CI/CD processes through an API**
- Proposed and led adoption of [StackOverflow for Teams](#) across the company to break down knowledge silos
- Provided thorough **documentation and support** to product delivery teams, helping to resolve bugs quickly and accurately
- Oversaw release of new major features, including **VM cloning**, which enabled Windows updates of customer VMs with no loss of service

Software Engineer @ Zynstra

OCT 2018 - MAR 2020 // Bath, UK

- Fully **reworked the existing high availability solution** - reimplemented in Python, with 95% unittest coverage and robust integration testing
- Part of the team that implemented a new topology - notably involved support for **live migration of VMs, enabling zero downtime**
- **Automated GitLab tasks** through the GitLab API to make labelling and categorisation of thousands of GitLab issues more efficient and reliable
- **Enhanced capabilities of various external tools** via patches to better support company's use cases
- Led the work on Image Library - a new feature for **distributing VM images across stores** in an automated, efficient and scalable way

Google Summer of Code Intern @ University of Antwerp

MAY 2018 - AUG 2018 // Antwerp, BE (remote)

- Reworked an existing JS tool for context-free generation called [seed](#) into an **npm** module
- **Built a Twitter bot** for [calming heated discussions on Twitter](#) using a machine learning backend in **Python** and a **NodeJS** text generator, deployed to Heroku
- Created a **custom built dataset** of labelled tweets for the machine learning training

Research Intern @ Digital Centre, University of Hull

MAY 2017 - AUG 2017 // Hull, UK

- Worked on **machine learning code generation** from JSON config files and domain-specific language scripts using [DEFIne](#)
- Created an [ANTLR4 grammar for lexing and parsing the DSL](#) into working Keras scripts

Skills

Programming Languages

Python, JavaScript & TypeScript, Golang, C#, Bash, HTML & CSS, SQL (PostgreSQL) and NoSQL (MongoDB, CouchDB)

Libraries & Frameworks

Pandas, Flask, FastAPI, TensorFlow, Keras, NodeJS, Express, React, REST APIs, GraphQL (+Apollo)

Tools & Platforms

Linux, Xen, Docker, Kubernetes, GitHub Actions, Jenkins, DRBD

Education

University of Hull

2015 - 2018 // Hull, UK

Graduated with **First-Class Honours // 84%**
Dissertation: [Hyperparameter Optimization for Neural Networks](#)

Research & Publication

Journal of Language Aggression and Conflict

[Online hatred of women in the Incels.me Forum](#)

Created, trained and optimised machine learning models - multichannel CNN models reached **accuracy of 95%**

Awards

R&D Award at NCR - 2022

Meritorious // Virtual Machine Pinning

Enabled **up to 30% more VMs** running on the same hardware

R&D Award at NCR - 2021

Distinguished // Image Library

Tool for distributing VM images efficiently. Achieved **size reductions of up to 90%**

G. B. Cook Prize - 2017

Award for attaining the highest grade average of the whole class at the University for the year