# **CURRICULUM VITAE: ZANE VAN IPEREN**

### PERSONAL DETAILS

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### **EDUCATION**

#### Bachelor of Information Technology (Hons), 2017

THE UNIVERSITY OF QUEENSLAND, St Lucia, QLD, Australia

#### **Queensland Certificate of Education, 2011**

THE SPRINGFIELD COLLEGE, Springfield, QLD, Australia

#### Certificate II in Information Technology, 2008

METROPOLITAN SOUTH INSTITUTE OF TAFE, South Brisbane, QLD, Australia

#### PROFESSIONAL EXPERIENCE

#### **JULY 2024 - PRESENT**

Senior Software Engineer, Caesars Entertainment, Inc., Australia.

#### MARCH 2024 - PRESENT

Senior Engineer, ZeroFlucs Pty Ltd, Australia.

#### MAY 2023 - MARCH 2024

Software Engineer, Titanium Studios Pty Ltd, Australia.

- Software developer on the Croc: Legend of the Gobbos remaster.
- Originally reverse-engineered and ported a leaked PS1-era source build (colloquially known as 'Croc: Definitive Edition') to modern platforms; this work formed the foundation of the remaster.
- Continued development in-house post-acquisition of the port, targeting PC, Xbox One, Xbox Series XIS, PS4, PS5, and Nintendo Switch.

#### OCTOBER 2021 - MAY 2023

Developer, Entain Group Pty Ltd, Australia.

- Actively contributed to the development and maintenance of PriceKinetics, a core component of Entain Australia's extensive bookmaking platform composed of numerous microservices, significantly bolstering the achievement of business objectives.
- Integrated data feeds from a diverse range of providers, encompassing both local and international sources, to enhance overall system functionality.
- Designed and implemented highly-available microservices, ensuring minimal downtime and consistent, reliable performance.

#### **MARCH 2017 - OCTOBER 2021**

**Software Developer**, *The University of Queensland*, Australia.

Worked at the Research Computing Centre (RCC) at the University of Queensland.

- Redesign the Nimrod distributed computation toolkit,
- Provide a user-friendly web portal to interface with Nimrod and the HPC.
- Write software and utilities to support various research across multiple faculties at UQ.
- Install and manage UQ's Globus Connect platform.
- Spearheaded the migration of organisational infrastructure to resiliant infrastructure using a combination of Kubernetes and IaaC techniques (Terraform), based on the ARDC Nectar Research Cloud.

#### **JANUARY 2017 - MARCH 2017**

**Intern**, *University of Cambridge*, United Kingdom.

Interned at the Facilty of Engineering as a companion program to my honours degree.

- Implement and optimise the Multi-objective Tabu Search II (MOTS2) algorithm in Nimrod/OK.
- Use MOTS2 to determine the optimal shape of an aerofoil subject to various constraints.

#### FEBRUARY 2014 - NOVEMBER 2014

**Teaching Assistant**, The University of Queensland, Australia.

• Assist with teaching and administration activities for the *Algorithms and Data Structures* and *Programming in the Large* student courses.

#### EXTRA-PROFESSIONAL EXPERIENCE

#### APRIL 2021 - PRESENT

Package Maintainer, NixOS.

Open-source Linux distribution.

#### **JANUARY 2020 - PRESENT**

Maintainer, FFmpeg.

Popular open-source multimedia processing utility.

- · Reverse-engineered and added support for various multimedia codecs and formats.
- Code review and ongoing maintenance.

#### FEBRUARY 2016 - NOVEMBER 2017

Honours Student, The University of Queensland, Australia.

• Implement and optimise the Multi-objective Tabu Search II (MOTS2) algorithm in Nimrod/OK.

#### **JULY 2015 – NOVEMBER 2015**

Development Lead - Undergraduate Project, The University of Queensland, Australia.

• Created *Pieces of Eight*, a cross-platform, multiplayer, Mario Party-inspired game using the Unity3d engine.

This project was nominated for *Best Non-Thesis Project* and for *Best Software Project* in the UQ Innovation Showcase for 2015.

# **COMPUTER SKILLS**

Programming C, C++, C#, Java, Go, SQL Web HTML, CSS

Scripting Python, Shell, Nix Misc LATEX, Git, OpenGL

Systems Linux, Windows DevOps Ansible, Terraform, OpenStack,

AWS, Docker, Kubernetes

# **LANGUAGES**

English Native Russian Basic (A1)

## LEISURE AND HOBBIES

Computing Reverse Engineering, Programming Sports Weight Lifting, Calisthenics

#### **PUBLICATIONS**

- [1] H. A. Nguyen, Z. van Iperen, S. Raghunath, D. Abramson, T. Kipouros, and S. Somasekharan, "Multi-objective optimisation in scientific workflows," *Procedia Computer Science*, vol. 108, pp. 1443–1452, 2017, International Conference on Computational Science, ICCS 2017, 12-14 June 2017, Zurich, Switzerland, ISSN: 1877–0509. DOI: 10.1016/j.procs.2017.05.213. [Online]. Available: http://www.sciencedirect.com/science/article/pii/S1877050917308062.
- [2] D. Abramson et al., "A Cache-Based Data Movement Infrastructure for On-demand Scientific Cloud Computing," in *Supercomputing Frontiers*, D. Abramson and B. R. de Supinski, Eds., Cham: Springer International Publishing, 2019, pp. 38–56, ISBN: 978-3-030-18645-6. DOI: 10.1007/978-3-030-18645-6\_3. [Online]. Available: https://link.springer.com/chapter/10.1007%2F978-3-030-18645-6\_3.
- [3] Z. van Iperen, D. Green, H. Nguyen, and D. Abramson, "Embedded Nimrod, Enabling easy HTC in HPC environments," presented at the eResearch Australasia 2019 (Brisbane Convention & Exhibition Centre, Oct. 21–25, 2019), Brisbane, Australia, Oct. 22, 2019. [Online]. Available: https://conference.eresearch.edu.au/wp-content/uploads/2019/08/2019\_eResearch\_89\_Embedded-Nimrod.pdf.
- [4] D. Abramson, J. Carroll, M. Mallon, A. Narayanan, E. Scriven, and Z. van Iperen, "CAMERA, Focussing on instrument based research," presented at the eResearch Australasia 2019 (Brisbane Convention & Exhibition Centre, Oct. 21–25, 2019), Brisbane, Australia, Oct. 22, 2019. [Online]. Available: https://conference.eresearch.edu.au/wp-content/uploads/2019/08/2019\_eResearch\_84\_CAMERA-Focussing-on-instrument-based-research.pdf.
- [5] H. A. Nguyen, Z. van Iperen, J. Carroll, N. D. Condon, D. Abramson, and J. Springfield, "A Web-based graphical interface for microscopy image analysis on a GPU cluster," presented at the Light Microscopy Australia 2019 (Translational Research Institute Australia, Mar. 6–8, 2019), Brisbane, Australia, Mar. 6, 2019. [Online]. Available: https://github.com/UQ-RCC/LMA2019-poster/blob/master/main.pdf.
- [6] H. A. Nguyen et al., "GRAPHICAL USER WEB BASED INTERFACE FOR BATCH PROCESSING OF IMAGES ON A LINUX BASED GPU HIGH PERFORMANCE CLUSTER," presented at the Focus On Microscopy 2019 (Queen Elizabeth II Centre, Apr. 14–17, 2019), London, United Kingdom, 2019. [Online]. Available: http://www.focusonmicroscopy.org/2019/PDF/1131\_Springfield.pdf.







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