Tuan Dung Lai

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EDUCATION

Swinburne University of Technology, Hawthorn, Melbourne, Australia

- Bachelor of Computer Science with Mathematics minor   Feb 2017 – Jun 2020
  - GPA: 3.7/4.0 (Transcript)
  - Leader of Swinburne team in competitive programming contest ACM/ICPC (Certificate)

PERSONAL PROJECTS

- **Machine Learning Blog (Web)** (Link)   Feb 2017 – now
  - Analyzes machine learning algorithms from mathematical perspective then visualize and implement them from scratch in python

- **AI for Flappy-Bird Game (Python)** (Report) (Code)   Aug 2017 – Sep 2017
  - Develops a bot that can learn to Flappy-Bird Game over time
  - Uses Python, PyGame, Neural Network Model, Genetic Algorithm

- **Interactive data visualization (Web)** (Link)   Mar 2018 – May 2018
  - Creates web-based interactive visualization to explore large data set
  - Uses D3 javascript library

- **Planetary Rover Game (C#, Winform)** (Link)   Jun 2017 – Aug 2017
  - Develops a desktop game that allows player to control 2 rovers and play around with different devices in a 20x20 simulated area
  - Uses C#, Winform, object-oriented principles, design patterns

- **K-Means Visualization, Image Compression tool (Pascal)** (Report) (Code)   Apr 2017 – Jun 2017
  - Helps students understand K-Means Algorithm faster by letting them visualize the process with their customized input followed by an application to reduce image file size and segment colors.
  - Contains 1300 lines of Pascal Code

AWARDS & SCHOLARSHIPS

- **Highest achieving student in introduction to programming unit prize**   2018
  - Provider: Integrated Application Development Pty Ltd

- **Swinburne international excellence scholarship – 4 year undergraduate**   2016
  - Provider: Swinburne University of Technology, Melbourne, Australia

- **National key program of mathematics development scholarship in period 2010-2020**   2014
  - Provider: Minister of Education and Training (MOET) of Vietnam (Certificate)

EMPLOYMENT

- **Sessional Academic - Swinburne University of Technology**   Feb 2018 – now
  - Unit code: COS10009 - Introduction to programming
  - Assists students with the entry level programming unit which use C and Pascal language.
- **Research internship - Swinburne University of Technology**   Nov 2017 – Apr 2018
  - Develops cross-platform application with voice-based user interaction, motion-compensated sound playback and 3D surround sound technology.
  - Uses Javascript, Java, Max/MSP, GoogleVR API, Google Speech API and audio processing tools.
  - Supervisor: Dr. Chris McCarthy
- **Barista**   Feb 2017 – now
  - Excelled within service-oriented positions (concurrent with college studies), delivering premium customer service and attracting repeat customers

LINKS

- **Github**: github.com/DungLai
- **Linkedin**: linkedin.com/in/tuandunglai
- **Website**: dunglai.github.io

[CV compiled on 2018-07-19]

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19 July 2018

Dear recruiters,

I am applying for summer research program at CSIRO. I am currently pursuing my bachelor's degree in Computer Science and would like to contribute to the research community at Data61 and push forward the scientific boundaries.

The projects I applied are perfectly aligned with my interests which are using machine learning, mathematics and AI to produce algorithms that solve problems. My hobby during the last 2 years is building my technical blog which mainly about analyzing various machine learning algorithms from a mathematical perspective, implementing and visualizing it and then building prototypes and applications.

During my first year at Swinburne University, I was involved in 2 consecutive summer research scholarships with Dr. Chris McCarthy and other researchers. That allows me to learn how to communicate ideas, review existing literature, learn various programming languages, use different tools and adapt to new APIs and libraries in a short amount of time. Later I became a sessional academic in an introductory programming unit that uses Pascal and C languages at Swinburne.

My long-term aspiration is to become a researcher who has true and positive impacts on mankind. The program offered by Data61 will provide me a chance to work with great people, improve my skills that assist my honours and Ph.D. study in the future.

I try hard to hone my skills and believe that my previous knowledge, experience, and interests are aligned with the projects I applied.

Thank you for your time and consideration.

Sincerely,

Tuan Dung Lai