# **Dung Lai**

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#### **EDUCATION**

### Swinburne University of Technology, Hawthorn, Melbourne, Australia

Bachelor of Computer Science

Feb 2017 – Jun 2020

- GPA: 3.9/4.0 (Transcript)
- Leader of Swinburne team in competitive programming contest ACM/ICPC (Certificate)

# PERSONAL PROJECTS

### ■ Machine Learning Blog (Web) (Link)

Feb 2017 - now

- Analyze 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
- 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, make uses of object-oriented principles, design patterns
- K-Means Visualization, Image Compression tool (Pascal) (Report) (Code) Apr 2017 Jun 2017
  - Help 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

### ■ Swinburne international excellence scholarship – 4 year undergraduate

2016

2014

- Provider: Swinburne University of Technology, Melbourne, Australia
- National key program of mathematics development scholarship in period 2010-2020
  - Provider: Minister of Education and Training (MOET) of Vietnam (Certificate)

#### **EMPLOYMENT**

#### Swinburne - Summer research intern (Website)

Nov 2017 - Feb 2018

- Project title: An immersive journey preparation tool for people with vision impairment
- Develops an auditory-based simulator to simulate the sensory experience of a specific location in Melbourne's CBD as a navigation training aid for the visually impaired for the City of Melbourne Project to improve accessibility
- Project investigator: Dr. Denny Meyer. Supervisor: Dr. Chris McCarthy
- Uses Max MSP for signal processing to produce Ambisonics 3D sound and integrate external head tracker.

■ Barista Feb 2017 – now

• Excelled within service-oriented positions (concurrent with college studies), delivering premium customer service and attracting repeat customers

## PROGRAMMING LANGUAGES

- **Familiar**: Python (Numpy, Scikit-learn, Matplotlib)
- Proficiency: C# (.NET), C, Matlab, SQL, HTML/CSS, JavaScript, HTML/CSS, PHP

LINKS

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

 $[CV\ compiled\ on\ 2018-01-26]$