

# NICHOLAS LAMBOURNE

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## EDUCATION

### The University of Queensland

Bachelor of Engineering (Hons) (Software Engineering)  
Bachelors of Commerce/Science (Finance & Psychology)

St Lucia, QLD, Australia

Feb 2016 - Nov 2020

Class of 2015

## EXPERIENCE

### The University of Queensland - Complex and Intelligent Systems Group

*Research Assistant*

St Lucia, QLD

Jun 2018 - Present

- Part of an interdisciplinary team of linguists and engineers producing software for the Ngukurr OPIE Social Robot Project (see Hermes, below). Conducted tutorials and created an academic poster demonstrating the produced software.
- Contributed to the Transcription Acceleration Project through work abstracting away the complexity of the Kaldi Automatic Speech Recognition library. Originally only a CLI toolkit, a GUI is currently being developed (Elpis).

### The University of Queensland - Faculty of Engineering, Architecture & IT

*Teaching Assistant*

St Lucia, QLD

Jul 2018 - Present

- Led tutorials and supervised practicals for the course *Programming in the Large*, where students are taught Java, object-oriented programming and the fundamentals of GUI development.
- Responsible for several teams of first-year engineering students taking the course *Engineering Modelling and Problem Solving* in which they utilise industry tools including CREO and Matlab to design, build and test a model UAV.

### Patchd, Inc.

*Software Engineering Intern*

San Francisco, CA

Jan 2019 - Feb 2019

- Worked at a Y-Combinator backed startup on parallelisation strategies for the training of recurrent neural networks for the detection of sepsis from vital sign data. Also introduced elements of software engineering best-practice to the firm.

### ADLED Pty. Ltd. & SS Signs

*Technical Advisor*

Cleveland, QLD

Oct 2015 - Dec 2017

- Developed software to monitor a network of LED billboards and control the rotation of certain installations (see projects).
- Compiled financial reports and worked with industry groups to lobby local governments on legislative issues.

## SKILLS

### Programming Languages

Familiar: Python, Java, C, JavaScript, SQL, L<sup>A</sup>T<sub>E</sub>X, HTML/CSS

Encountered: Matlab, Ruby, AVR Assembly, SML, Smalltalk, Prolog

### Other Skills

Tools: VCS (Git, SVN), Web Frameworks (Django, Flask, ExpressJS), NodeJS, Jupyter, REST APIs, Unix (Ubuntu), Web Servers (nginx, Apache), SQL DBs (PostgreSQL, MySQL), NoSQL (MongoDB), CI/CD (Jenkins), Wordpress, Cloud Platforms (AWS EC2, S3, EB; Heroku), Machine Learning (Tensorflow)

## PROJECTS

### Elpis - Accelerated Linguistic Transcription (<https://github.com/CoEDL/elpis>)

- Part of a team developing a framework and GUI for automatic speech recognition using the Kaldi ASR library.

### Hermes - The Language Resource Creator (<https://github.com/CoEDL/hermes>)

- Developed a cross-platform Python/Qt application for creating language resources from linguistic analysis files.

### ndl.im (<https://github.com/nicklambourne/personal>)

- Personal website built using NodeJS, ExpressJS and MongoDB with an automated build pipeline and Jenkins for CI/CD.

### uqcsbot (<https://github.com/UQComputingSociety/uqcsbot>)

- Contributed new Python scripts, script overhauls, and code reviews to my university computing society's Slack bot.

### adled-io (Proprietary/Closed Source)

- Portal for monitoring an LED billboard network with real-time status and live video using Python, Django & PostgreSQL.

### LED Billboard Rotation System (Proprietary/Closed Source)

- Python system for controlling the rotation of large-format LED billboards including GUI and concurrency-based features.

## VOLUNTEERING

### University of Queensland Computing Society

2014 - Present

- Elected president of the 400+ member society for the 2019 academic year.
- I have also given lightning talks, assisted with events and contributed to open source projects (websites, Slack bots etc.).

### Node Girls/Django Girls/Robogals (Brisbane Chapters)

2016 - Present

- Provided mentorship in web and robotics technologies in an effort to increase female representation in technology.

### YOW! Developer Conferences

2017 - Present

- Participated as a student volunteer assisting with conference organisation and preparation.

## SCHOLARSHIPS, GRANTS & PRIZES

### UQ Summer Research Scholarship

The University of Queensland (2019)

### UQ Advantage Grant (CoEDL Summer School)

The University of Queensland (2018)

### UQ Winter Research Scholarship

The University of Queensland (2018)

### University of Connecticut Innovation Quest - Finalist

The University of Connecticut (2018)

### UQ Abroad Travel Grant (University of Connecticut)

The University of Queensland (2018)

### Dean's Commendation for Academic Achievement

The University of Queensland (2011)

*References available on request*