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**EDUCATION**

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**University of Edinburgh**

Edinburgh, Scotland

***Doctor of Philosophy in GeoInformatics****Sept 2018 – present*

Fully funded by NERC, and in collaboration with the MET Office

Under Edinburgh Multidisciplinary Doctoral Training Partnership (E3DTP) programme

*Topic:* Using machine learning to parameterize climate and weather processes: a case-study on convection*Supervisors:* Prof. Simon Tett, Prof. Amos Storkey, Dr. Keith Williams**University of Oxford**

Oxford, England

***Master of Engineering in Information Engineering; ranked 3<sup>rd</sup> in cohort****Oct 2014 – Jun 2018*

Fully funded by John Swire &amp; Sons Ltd., and funded by college and department

Specialized in machine learning and control theory

*Thesis Topic:* A generic model and a distributed algorithm for station based bike sharing systems*Supervisor:* Prof. Kostas Margellos

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**EXPERIENCE**

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**Lawrence Berkeley National Laboratory**

Berkeley, CA

***Research Fellow****Jul 2019 – Oct 2019*

Developed generative deep learning models for super-resolution of cloud resolving models

**Taro Studio**

Edinburgh, Scotland

***Co-founder****Feb 2019 – Sept 2019*

Designed a next-gen weather app that understands personalized environmental perception using machine learning

**Royal Botanic Garden Edinburgh**

Edinburgh, Scotland

***Data Scientist****Jan 2019 – Mar 2019*

Analyzed spatial climate data to investigate the threats to tropical forest and carbon and biodiversity loss

**HYPED**

Edinburgh, Scotland

***Software Engineer****Sept 2018 – Jun 2019*

Designed a pod navigation system using Kalman filter for Hyperloop, a revolutionary mode of transport

**Oxford Strategy Group Digital**

Oxford, England

***Associate Digital Consultant****Jan 2018 – Jun 2018*

A student-led digital consultancy in the UK

Provided digital consultancy service in data science

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**PROJECTS**

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Codes are available on [github.com/edenau](https://github.com/edenau).

- **Super-resolution GAN:** Leveraged SRGAN in enhancing spatial resolution of cloud resolving model outputs
- **Deep learning:** PhD project, analyzing spatio-temporal climate data by supervised learning
- **Data visualization:** visualized bike sharing systems using interactive maps and animations
- **Distributed optimization:** Master's project, constructed optimization algorithms in a distributed computing framework, and applied it to balancing bike sharing systems with significant improvement in performance
- **Camera calibration:** built a calibration algorithm for pinhole cameras by machine vision techniques
- **Engineering product design:** designed a novel prosthetics with use of fast and wireless communication protocols
- **Android APP:** designed a simple APP in four days for one to explore a city with ease
- **Interactive system design:** high school project, built a user-friendly examination sitting arrangement system

## SKILLS

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- **Programming languages:** Python, C++, MATLAB, Pascal
- **Markup languages:** Markdown, L<sup>A</sup>T<sub>E</sub>X, Beamer
- **Python frameworks:** NumPy, SciPy, pandas, Matplotlib, seaborn, scikit-learn, TensorFlow 2.0, Sphinx, Flask
- **Technologies:** GitHub, FFmpeg, SolidWorks, Rose-Cylc
- **Natural languages:** English, Mandarin, Cantonese, Taiwanese, Spanish
- **Writing:** one of 50 Top Writers in data science and technology on Medium @edenau
- **Public speaking:** gave talks regarding NGOs, machine learning etc.
- **Extracurricular:** Hass.io, neo-classical music, languages, (association) football