

EDUCATION

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 3rd in cohort

Oct 2014 – Jun 2018

Fully funded by John Swire & 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

EXPERIENCE

Lawrence Berkeley National Laboratory

Berkeley, CA

Research Assistant

Jul 2019 – present

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

Taro Studio

Edinburgh, Scotland

Co-founder

Feb 2019 – present

Designing 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

PROJECTS

Codes are available on github.com/edenau.

- **Generative adversarial network:** developing 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

- **Programming languages:** Python, MATLAB, Pascal, \LaTeX
- **Frameworks:** Keras, TensorFlow, Sphinx, Flask
- **Technologies:** Git, SolidWorks, Rose-Cylc
- **Natural languages:** English, Mandarin, Cantonese, Taiwanese, Spanish
- **Writing:** data science blogger on Medium @edenau
- **Public speaking:** gave talks regarding NGOs, machine learning etc.
- **Extracurricular:** Hass.io, neo-classical music, (association) football