

Elaine Zhao

DATA SCIENTIST

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Singapore Citizen



github.com/zzeniale/portfolio



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EDUCATION

Data Science Immersive

General Assembly, Singapore

2019

Capstone project:

Estimating real-time traffic volume with neural networks using traffic camera images

BA Biological Sciences

Oxford University, United Kingdom

2012 - 2015

Introduction to Statistical Learning

Stanford Lagunita (Online)

2019

Data Scientist with Python Track

DataCamp (Online)

AISG AI for Industry Programme

2019

SKILLS

Python

Machine learning

SQL

Neo4j

Data visualisation

Statistical analysis

Experimental design

Excel VBA

ArcGIS

Adobe Photoshop

Adobe Illustrator

Scientific writing

PROFESSIONAL PROFILE

Data scientist developing end-to-end machine learning models to build proprietary technologies at a food-tech start-up. Also experienced in performing hands-on laboratory works showing great attention to detail. Strong scientific background and understanding of experimental design components.

EXPERIENCE

Associate Data Scientist

Hoow Foods | Singapore | Jan 2020 - Present

- Developing optimisation and machine learning algorithms using PyTorch and Scikit-learn to model key processes involved in the company's food reformulation technology.
- Deployed productionised model and designed simple user interfaces with Flask.
- Gather and clean large sets of raw data using Selenium, Tesseract, and Pandas.
- Setting up the company's first databases by evaluating multiple database systems such as Neo4j and MongoDB.
- Presenting and interpreting model findings according to business needs at weekly internal presentations.
- Conducted laboratory experiments in accordance with GLP and GDP as part of a reformulation project for a major client in the food industry.
- Supervise staff performing laboratory experiments to evaluate machine learning algorithms.

Environmental Consultant (Marine Biology)

DHI Water & Environment | Singapore | Sep 2015 - Jul 2019

- Monitored the environmental impact of client developments, through carrying out primary data collection and preparing audit reports for clients such as NParks, HDB, and SDC.
- Improved workflow efficiency by ~90 % using VBA and Python; automated and streamlined manual data management and data analysis techniques.
- Created visualisations of survey data using ArcGIS to enhance presentation of findings in reports.
- Managed geodatabase containing over 20 sub-categories in ArcCatalog, and created new shapefiles to enhance existing database according to business needs.
- Successfully led over 15 field surveys by obtaining permits, coordinating manpower, and arranging logistics.
- Designed survey methodologies for 2 new habitat surveys.

Research Intern

NUS Experimental Marine Ecology Laboratory | Mar - Aug 2012

- Co-authored the research paper "Environment-induced colour changes in the massive corals *Dipsastraea speciosa* and *Diploastrea heliophora*" with NUS Associate Professor Peter Alan Todd and Professor Chou Loke Ming, published in the journal Nature in Singapore.
- Designed publicity material for the Giant Clam Conservation Project using Adobe Illustrator and Adobe Photoshop.