

# 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

Data visualisation

Scientific research and writing

Statistical analysis

Experimental design

Excel VBA

ArcGIS

Adobe Photoshop

Adobe Illustrator

## PROFESSIONAL PROFILE

Elaine is a data scientist developing end-to-end machine learning models to build proprietary technologies at a food-tech start-up. She is skilled in methodically breaking down business needs into solvable data science problems. She is also experienced in conducting hands-on laboratory works with great attention to detail. Originally trained in biology, she possesses a strong scientific background and understanding of experimental design components. Aside from work, she has also successfully launched a home-baking venture and carries out all aspects of operations including marketing, logistics, and product formulation.

## EXPERIENCE

### Associate Data Scientist

Hoow Foods | Singapore | Jan 2020 - Present

- Designing and building machine learning solutions to model key processes involved in the company's food reformulation technology.
- Deploying productionised model and designing simple user interfaces with Flask and Kivy.
- Gathering and cleaning large sets of raw data using Selenium, Tesseract, and Pandas.
- 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.
- Worked with laboratory team to conduct experiments to evaluate machine learning algorithms.
- Supervising and guiding a data analyst in carrying out his own projects.

### 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 writing 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.