Melanie Marochov

Geospatial Data Scientist and Developer

itsmel.io MMarochov Melanie Marochov

Employment History

September 2021 - present

Graduate Scheme @ Ordnance Survey

Throughout the graduate scheme I have specialised in spatial data science, web development, and practical ethics at the intersection of geospatial data and artifical intelligence (GeoAI). I've traversed the business through three placements:

September - April 2022/23

Graduate Technical Consultant | Developer Experience Team

As part of this team, I worked on shaping a critical national dataset that will underpin census data analysis; gained valuable insight into what makes an effective customer relationship (i.e., through building a web map for a TV presenter); produced data visualisations that received higher-than-average public engagement on social media; and introduced Git and Azure DevOps to the team, helping them upskill and use better code sharing practice.

Core Skills: Python SQL Customer-focused

April - September 2022

Graduate Data Scientist | Rapid Prototyping Team (RPT)

In the RPT, I got thrown in at the deep end of geospatial data science and web development. I worked on a diverse array of prototypes, enhancing skills such as Python programming and agile development. The fast-paced environment and fun team culture made the RPT my favourite placement.

Core Skills: Python Html Svelte CSS Agile

September - March 2021/22

Graduate Research Scientist | Research Team

In my first placement I focused on advancing OS's efforts to incorporate ethical practice in geospatial data and artificial intelligence (GeoAI) workflows. Some of the highlights were running an external-facing hybrid workshop on practical tools in GeoAI ethics, and introducing Model Cards through creating an internal Model Hub for OS's machine learning algorithms.

Core Skills: GeoAI ethics Azure DevOps

Education

October 2019 - December 2020

M. Sc. (Research), Geography @ Durham University

The crux of my postgraduate research was to develop a method which uses deep learning for semantic segmentation of Sentinel-2 satellite imagery containing marine-terminating glaciers in Greenland. Highlights included publishing a paper in one of the top peer-reviewed glaciology journals and demonstrating in undergraduate Remote Sensing practicals.

October 2016 - July 2019

B. Sc., Geography @ Durham University

First Class Honours

June 2015 - June 2016

Advanced Highers, Highers @ Jedburgh Grammar School

Advanced Highers (ABB) · Highers (AAABB)

Skills

Geospatial Analysis and Python Tools
QGIS, ArcGIS, SQL, Remote Sensing Imagery, Machine Learning, GeoPandas, MovingPandas, Matplotlib

Prototyping
Creative Problem Solving, Human-Centered Design, Collaborative Working

Front-End Development
HTML, CSS, JavaScript, Leaflet, Svelte, Node

Agile Methodologies and Software
Scrum Developer, Scrum Master, Azure DevOps, VSCode, Git, GitHub, Anaconda, Mamba, Databricks, Jupyter Notebook

Transferable
Writing, Customer Relationships, Presenting, Research, Consultancy

Publications

Image classification of marine-terminating outlet glaciers in Greenland using deep learning methods

Marochov et al. 2021 | The Cryosphere, European Geosciences Union

Work Experience

May - June 2021

Research Assistant

Durham University

January 2021

GIS Consultant

Findlay Ecology Services

January 2021

Marine Geoscientist

British Geological Survey

Awards

2019

The Willimott Prize | Durham Geography Department

2014 - 2017

Duke of Ediburgh's Award | Gold, Silver, and Bronze

Interests