Mitchell **Foley**

Software Developer

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Highly motivated career-transitioner, pursuing computer science after several years dedicated to town planning and environmental engineering. Extensive education with a Bachelor's (Engineering Technology), Graduate Diploma (Spatial Science) and Master's (IT) qualifications. Real-world experience working with clients, managing projects, and streamlining business processes.

EDUCATION

Master of Information Technology (Software Development)
University of Southern Queensland (USQ)
2022 – 2024

Graduate Diploma of Spatial Science Technology (GIS)
University of Southern Queensland (USQ)
2018 – 2019

Bachelor of Engineering Technology (Environmental)
University of New England (UNE)
2014 – 2016

UNIVERSITY EXPERIENCE

Frontend Web Development (HTML, CSS, JS)
- Designed and implemented websites using HTML, CSS, and JavaScript.

Backend Web Development (C# / .NET, SQL Server, Git)
- Developed web API backend with C#/.NET, using ASP.NET Identity for user management, JWTs for authentication, xUnit for unit testing, and Entity Framework Core (EF Core) ORM with SQL Server. Version control with Git and Gitea repository.

Database Management (SQL Server, MySQL, MongoDB)
- Managed databases using SQL Server and MySQL. Worked on entity-relationship (ER) modelling, normalization, and database creation and querying using SQL.
- Designed and implemented NoSQL databases (MongoDB).

Data Analysis and Visualisation (Python)
- Conducted data analysis with Python on large datasets utilising Pandas and PySpark (RDDs and Dataframes).
- Visualisation of data using Matplotlib and Seaborn libraries.

Machine Learning (Python)
- Applied Python libraries (SciPy and Scikit-learn) for supervised and unsupervised machine learning projects.
- Performed exploratory data analysis (EDA) with Pandas for feature selection and dimensionality reduction using PCA.
- Implemented and evaluated models including decision trees, random forests (RF), linear regression, support vector regression (SVR), K-means clustering, and hierarchical clustering.

Aerial / Satellite Imagery Analysis (ArcGIS & QGIS)
- Conducted geoprocessing and rectification of aerial and satellite imagery with ArcGIS and QGIS.
- Analysed multispectral Landsat and MODIS imagery for vegetation indices (NDVI) and infrared band analysis.

Geospatial Analysis and Scripting (ArcGIS Model Builder, ArcPy, File Geodatabase)
- Automated geoprocessing tasks using ArcGIS Model Builder and ArcPy scripts. Created custom toolboxes for ArcGIS.
- Design and optimisation of ArcGIS File Geodatabases.
- Designed and built web applications using ArcGIS Online and QGIS (QGIS2Web) and Geoserver.

WORK EXPERIENCE

Town Planner

O'Ryan Geospatial | 2020 – 2023

- Managed development assessments for dozens of successful projects.
- Prepared comprehensive statement of environmental effect (SEE) reports and other planning documents.
- Advised clients on aligning their development with planning standards and regulations.
- Engaged external consultants to prepare technical reports and plans.
- Led numerous meetings with clients and local government officials.
- Experience interpreting deposited plans (DPs), titles and easement documents (88B instruments).
- Assisted with the interpretation of UAV photogrammetry datasets and reports.
- Streamlined preliminary town planning research and map creation by building an interactive web map using the Web App Builder and Experience Builder provided by ArcGIS Online.
- Integrated geospatial data sourced from public web APIs into the web map to inform town planning and development decisions.

Trainee Engineer

Armidale Regional Council | 2015 – 2018

- Extracted several hundred thousand LGA water consumption records using MS Access and performed statistical analysis using MS Excel.
- Streamlined mandatory data reporting by transitioning from paper-based to digital processes, saving several weeks annually in data compilation and analysis.
- Undertook significant revisions to a resource recovery area design using drafting software.
- Researched and prepared draft waste management strategic documents.

SES Volunteer

NSW State Emergency Service | 2015 – 2018

- Contributed to the local branch of the State Emergency Service (SES) to support public safety in a diverse team with a strong focus on safety, teamwork, and communication.
- Qualifications in WHS, teamwork, training and assessment, communication, and first aid.