THEODOR BAUR

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EMPLOYMENT

Software Development Intern

Global Aerospace

Summer 2024, Summer 2023

Banks Project

- Created an interface to input and normalize unformatted insurance policy data sent by banks, storing it in an internal database using **Visual Basic** and **SQL**.
- Created automated, interactive data analysis reports using **PowerBI**, integrated with the internal database via **SQL**, allowing for data projections, filtering, and insurance policy comparisons.

EDUCATION

Cardiff

Cardiff University

September 2021 - September 2025

- MSc in Artificial Intelligence (Expected) (September 2024 September 2025).
 - Modules: Knowledge Representation; Automated Reasoning; Principles of Machine Learning; Computer Vision; Natural Language Processing.
- **BSc in Computer Science** (September 2021 June 2024) First-Class Honours (1:1)
 - Modules: Web Applications; Object Oriented Programming; Group Project; Data Processing and Visualisation; Computational Mathematics; Database Systems; Scientific Computing; Combinatorial Optimisation.

PROJECTS

- Multilayer Perceptron for Predicting Mango Dry Matter Content from NIRS Data (2025) A neural network that uses Near Infra-Red Spectroscopy data to predict the dry matter content of mangos.
 - Developed without the assistance of ML libraries and implemented entirely using **NumPy** with linear algebra to gain a better understanding of basic machine learning concepts such as bias, variance, and backpropagation.
- NLP Fact Checker (2024) A system written in Python and version controlled in Git that uses NLP to automatically retrieve evidence from an Elasticsearch database for user-made statements and assess truthfulness.
 - Trained language models with **HuggingFace** to assess the relevancy of passages.
 - Ported the final system into a web-application using Flask, HTML, CSS, and JavaScript.
 - Achieved a final mark of 84%.
- AIPlaylistNameGen.com (2023) A website that uses **Apple Music's API** combined with **OpenAI's API** to generate curated playlist names for Apple Music playlists based on the songs inside.
 - Backend uses **Flask** framework written in **Python**.
 - Created custom frontend using HTML, CSS, and pure JavaScript
- Tool Share Cardiff (2022) A Flask website group project that allows Cardiff community members to list and rent tools with a deposit payment system.
 - Implemented payment system using **Stripe API** and interactive map view using **Google Maps API**.
 - Managed users, tools, messages, reviews, reports, orders, and disputes using an **SQLite** database.
 - Effectively used **Git** branching strategies for version control among team.
- theobaur.co.uk (2021 Present) My personal portfolio website.
 - Configured VPS with **Apache2** for hosting.
 - Designed custom frontend with HTML, CSS, and pure JavaScript.

TECHNICAL SKILLS

- Languages: Python, Java, JavaScript, Visual Basic
- Tools: HTML, CSS, Git, Flask, SQLite, Power BI, RESTful APIs

Awards

- Awarded academic scholarships for both Bachelor's and Master's degrees at Cardiff University.
- Prize winner of the "100 Big Ideas" competition for a software start-up idea.