

JOEL GABRIEL GRIMMER

+44 (0)7871 000 588
joel.grimmer@gmail.com

linkedin.com/in/joelgrimmer
github.com/joelgg

EDUCATION

University of Bristol, United Kingdom

Master of Engineering (MEng) Computer Science with Study Abroad, September 2019 – July 2023

Classification: First Class with Honours

University of Copenhagen, Denmark (Year of Study Abroad)

Year 1 of 2-year Master of Science (MSc) in Computer Science, September 2021 – July 2022

EXPERIENCE

Software Engineer (Intern)

Byrd (Run coaching start-up), Bristol (Remote), UK, July 2021

- Refactored core data structures including user run history and run goals. Implemented an experiential goals system to analyse user data for unique achievements such as longest run, time of day, lunar cycle, alongside other similar metrics.

Software Engineer (Intern)

Byrd (Run coaching start-up), Bristol (Remote), UK, June 2020 – August 2020

- Developed core front end app features using Dart and the Flutter framework, including the settings view, run goal views, and user onboarding flow.
- Wrote local application interactions with the backend Firebase platform, including integrations for Cloud Firestore, Firebase Authentication, and Cloud Functions.
- Used code generation to manage JSON serialisation and de-serialisation for interacting with the backend.

PROJECTS

Master's Thesis: Deep Behavioural Action Recognition for European Roe Deer in the Wild

University of Bristol, 2023

- Developed the first deep learning behaviour recognition model designed specifically for camera trap footage of Roe deer, using a brand-new dataset, with the aim of detecting a set of basic behaviours.
- Tested the performance trade-offs of different video recognition backbones and investigated the effectiveness of different fusion strategies when using a multiple stream model architecture.

Early Diagnosis of Septic Patients with Machine Learning

University of Bristol, 2023

- Investigated a variety of approaches to time series analysis of patient data, including XGBoost and LSTM models.
- Contrasted the effectiveness of different data imputation and feature extraction techniques.

Automatic Programming System in Haskell and Cache Server in Erlang

University of Copenhagen, 2021

- Implemented a parser for a subset of the Haskell grammar of type-related constructs using the Parsec library, a resolver to convert parser types to a grammar of simple types, including product and arrow types, and a coder to enumerate expressions for a given simple type.
- Implemented a memory-based cache server that maintained a key/value store in Erlang, including using a least recently used (LRU) algorithm for cache replacement.
- Used the Erlang QuickCheck library to generate tests for various properties of the cache server's API.

Software Project: Electronic Portfolio for Students

University of Bristol, 2021

- Produced a Single Page Application to serve as the front-end, written using React and deployed to Netlify.
- Used Spring Boot to produce a REST API and used the JPA to manage persistence with the MySQL database.
- Deployed the Spring Boot backend to AWS Elastic Beanstalk and the MySQL DB to AWS RDS.
- Used GitHub Actions to manage automatic testing of both the frontend and backend.

Concurrent and Distributed Game of Life Simulation with Golang

University of Bristol, 2020

- Implemented concurrency with goroutines, and distributed computing with rpc and EC2 instances.

SKILLS

Languages: Python, JavaScript, TypeScript, Golang, Java, Erlang, Haskell, Dart, SQL, C

Frameworks & Platforms: React, Node.js, AWS, Firebase, Spring, Flutter, OTP

Developer Tools: Git, Docker, CI/CD, GitHub