JOHN ROSS MUNN

Basingstoke, UK (Open to Remote) | ross.munn888@gmail.com
https://www.linkedin.com/in/john-ross-munn-9ab454226/ | github.com/RossMunn

Highly motivated Graduate Computer Science student with expertise in full-stack web development, machine learning, and software development. Proven track record of successfully completing diverse projects, showcasing technical proficiency and problem-solving capabilities. Eager to contribute innovative solutions and collaborate/learn within a dynamic team.

EDUCATION

University of Surrey - Bachelors of Science, Computer Science, First-Class Honors 2023
International Study Group - Engineering Progression Scholarship, A-Levels, Average 85% 2020

TECHNICAL SKILLS

Object-Oriented | Python, Java, C++, Ruby, Dart
Front End | Vue.js, Ruby on Rails, Javascript, TypeScript, Node.JS, CSS, HTML
Back End | PHP, SQL(MySQL, Postgres), MongoDB, JavaScript, TypeScript, Python, JSON, XML
Testing/Deployment | JUnit, Firebase, Netlify, Heroku, Postman
Developer Tools | Docker, Git, npm, pip, Agile/Waterfall Methodology, Figma, Slack

EXPERIENCE & PROJECTS

Directional Gaze Estimator | Dissertation — Sep 2022 - June 2023

Built & optimized a gaze estimation system for HCI applications — Python | TensorFlow | Keras | OpenCV | C++

- Utilized insights from literature to develop and optimize a gaze estimation system by leveraging custom dual CNNs, person-dependent calibration data, and advanced object/feature extraction techniques, achieving a **97.38%** accuracy.
- Improved the systems performance by **7.57%** over traditional models by uniquely using calibration data for accuracy enhancement and implementing fine-tuning based on benchmarking and visualization of test data results.
- Procured, annotated, and preprocessed datasets to train and test gaze estimation models, laying the groundwork for the system's implementation for the specified task.
- Created a prototype user interface that demonstrated the system's potential for real-world HCI applications in navigation and communication devices, showcasing practical applicability.

Full-Stack Ecommerce Web Application | SwiftSwap — Feb 2023 - May 2023

Built services for user item posting — Vue.js | AWS | MySQL | Figma| Docker | Node.js | HTML | CSS | TypeScript

- Designed UX/UI interface layouts, wireframes, and a prototype demonstration using Figma to provide team members with clear guidance on creating an intuitive and user-friendly design for implementation.
- Implemented user item posting microservices using typescript, MySQL and Vue.js on top of team members authentication microservices, then dockerised each microservices databases for AWS deployment.
- Implemented frontend components and constructed pages using Vue.js and the outlined Figma design while incorporating other team members components and pages.
- Employed git version control to ensure smooth implementation and incorporated a continuous integration and continuous deployment (CI/CD) pipeline for streamlined updates and deployments.

Structured Live Internet Messaging RFC Protocol | Slim — Feb 2022 - May 2022

Java implementation of the SLIM protocol — Java | Gradle | XML | JSON

- Developed a new application-layer internet protocol for efficiently delivering structured binary data, providing a structured alternative to WebSockets or QUIC.
- Implemented in Java with UDP for transport-layer with an innovative chunk system, allowing data splitting for better performance over unreliable networks with support for 5G networks without compromising data integrity.
- Use of variable length integers for scalability and the XXH3 hashing library for fast and efficient integrity checking.
- Implemented denial of service protection strategies and ensured platform-independent design with reference implementations in multiple languages.