Lochlann O Neill

Software Development

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As a First-Class Honours graduate of Software Development at Munster Technological University, I am a results-driven professional with a proven track record of continuous skill development, accompanied by a strong work ethic. My time at MTU provided me with invaluable practical experience in utilizing the agile methodology to foster efficient teamwork, streamlined development processes, and rapid problem-solving. Familiar across all stages of the software development cycle, with a preference towards backend development.

EDUCATION

Munster Technological University - *BSc (Honours) Software Development* **Sep. 2018 – May. 2023**

Grade: First-Class Honours

Societies: Airsoft, Athletics, Gaming, Programming, Skateboarding

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WORK EXPERIENCE

Boston Scientific - *Electronic and Software Co-Op* **Jan. 2021 – Sep. 2021**

Summary: C#, Visual Studio, Excel, Primo, SharePoint, Teams, VNC Viewer 4, Watchdog, Windchill

- Maintained regular communication with local system owners and external developers of outsourced software to gather sensitive system information.
- Cleansed and updated data in Primo database by integrating information from factory systems, ensuring its accuracy and reliability for multiple project management SharePoints.
- Conducted meticulous code reviews of 'in-house' software, diligently adhering to predefined specifications to identify redundant component ID formats for subsequent refactoring.

SKILLS & INTERESTS

Programming: Java, Python, C, C#, HTML/CSS, Javascript, SQL
Technologies: Spring/SpringBoot, Docker, Kubernetes, MongoDB, Node.js
Misc: Agile Methodology, REST, Microservices, UX design, Git
Languages: English (Fluent), Irish (Elementary), French (Elementary)
Interests: Gaming, Hiking, History, Leetcode, Running, Skateboarding, Weight Lifting

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PROJECTS

Final Year Project - 3D Video Game Development (83% Year 4)

Summary: C#, Unity, Blender, Photoshop, Sony Vegas, Overleaf

Github: https://github.com/lochlannoneill/INTR8016-FinalYearProject-Unity

- Developed an immersive 3D video game, utilizing modern technologies such as Unity (C#) and Blender.
- Authored a comprehensive 35,000-word document, outlining the entire development process.
- Delivered an engaging in-person presentation, complemented by an informative poster, a captivating feature video, and a hands-on playable demonstration.

Portfolio Website - www.lochlannoneill.com (Personal Development)

Summary: HTML/CSS, Javascript, Bootstrap, Cloudflare

Github: https://github.com/lochlannoneill/website

- Developed an online portfolio, incorporating responsive design and interactive features to enhance user experience.

Frameworks - SpringBoot (93% Year 4)

Summary: Java, REST, Spring/SpringBoot, Maven, H2, JPA, JSON, Postman, Lombok, HATEOAS, MockMVC, SLF4J
Github: https://github.com/lochlannoneill/SOFT8020-Frameworks-REST-SpringBoot-JPA

- Created a RESTful web service for school enrollment on a H2 embedded database (offices, students, etc.).
- Implemented effective SLF4J logging to enhance system monitoring and debugging capabilities.
- Conducted throughout unit testing on the web service by employing MockMVC, ensuring the functionality and reliability of the service under different scenarios and inputs.
- Incorporated role-based authentication, effectively controlling access to specific resources and limiting responses to only those authorized for certain HTTP requests, ensuring data security and privacy.

Microservices - Docker/Kubernetes (77% Year 4)

Summary: Python, Docker, Kubernetes, gRPC, Redis, RabbitMQ, Prometheus
Github: https://github.com/lochlannoneill/SOFT8026-DataDrivenMicroservices-Docker-gRPC-Redis-RabbitMQ

- Designed and implemented a containerized microservice-oriented video game platform, leveraging Python, Docker, gRPC, and RabbitMQ to facilitate seamless communication and streaming.
- Migrated the system to a K3S environment and devised a robust scaling strategy.
- Performed thorough functional and non-functional testing and implemented a monitoring solution to optimize performance and resource allocation for optimal results.

Operating System Engineering - XV6 Qemu (95% Year 4)

Summary: C, xv6, Qemu, System calls, Interrupts, FUSE, GlusterFS
Github: https://github.com/lochlannoneill/COMP8051-OSEng-xv6-qemu

- Engaged in kernel-level development for the xv6 OS, extending its capabilities through the creation of custom system calls to enhance OS functionality (ps, trace, find, etc.).
- Enhanced the xv6 file system to accommodate larger files, thereby raising file size limits.
- Investigated the application of interrupts in I/O scheduling, FUSE, and GlusterFS.

Big Data & Analytics - PySpark & Spark Structured Streaming (100% Year 4)

Summary: Python, PySpark, Apache Spark
Github: https://github.com/lochlannoneill/SOFT8033-BigDataAnalytics-PySpark

- Formulated SparkSQL queries to compute various statistics and glean insights from the provided dataset.
- Implemented Spark Structured Streaming to conduct real-time data analytics on streamed input data.

REFERENCES

Dr. Larkin Cunningham
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