# Muradil **Udun**

SOFTWARE ENGINEER II · SONY INTERACTIVE ENTERTAINMENT

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## Skills

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|---|---|
| **Languages** | Java, Python, SQL, JavaScript, C |
| **Systems & Architecture** | Distributed systems, micro-services, event-driven architecture, ETL pipelines, REST APIs |
| **Tools & Technologies** | Cassandra, Redis, Kafka, ElasticSearch, MariaDB, AWS, Docker, Kubernetes |

## Work Experience

**Sony Interactive Entertainment** *San Francisco, CA*

SOFTWARE ENGINEER II *Jun. 2023 - Present*

- Increased game catalog discoverability by enabling a platform-level capability to rank **game collections**, reducing manual operator configuration and improving automated surfacing of relevant content
- Accelerated experimentation and product iteration by implementing new features in the personalization bidder service, supporting **A/B tests** and scaling successful results to production

SOFTWARE ENGINEER I *Aug. 2023 - Jun. 2025*

- Improved personalization accuracy and system reliability by productionizing a **real-time recommendation pipeline**, generating candidate sets on demand for personalized game suggestions
- Boosted revenue optimization of the PlayStation Store by integrating pricing data into the modeling domain, enabling **revenue-based ordering** of in-store banners
- Increased cost efficiency and operational reliability by leading the migration of **20+ microservices** from **Cassandra** to **AstraDB** through the refactoring of legacy libraries and coordinating cross-team adoption

SOFTWARE ENGINEER INTERN - SERVER *Sept. 2022 - Dec. 2022*

- Upgraded an **ETL** pipeline and internal query builder using **ElasticSearch** and **Java**, enabling more complex product queries and reducing manual stakeholder effort
- Built a **datalake** using **Apache Airflow**, **Python**, and **MySQL** to improve data analysis workflows and reporting efficiency
- Supported the migration to a v2 customer-facing API using **Kotlin** and **Couchbase**, providing users with an expanded feature set and improved performance

SOFTWARE ENGINEER INTERN - FRONTEND *Jan. 2022 - April. 2022*

- Led investigations into the PS4 Store navigation system to rapidly address **critical** navigation-related defects
- Expanded the automation framework's test coverage for new UI components by **18%** using **Python** and **pytest**
- Earned **First Prize** out of **170** teams in SIE's 12th Hackathon, receiving a **$1500** award for innovative application design

**D2L** *Kitchener, ON*

SOFTWARE DEVELOPER INTERN *May. 2021 - Aug. 2021*

- Improved and maintained the D2L learning management system and internal libraries using **C#**, **.NET**, **Node.js**, and **AWS**
- Enhanced CI/CD processes using Slack and **GitHub Actions**, reducing manual deployment work by **25%**
- Increased visibility into a data ingestion pipeline by **20%** through improved service-level metrics to strengthen site reliability

## Projects

**BrailleTaille**

PYTHON, OPENCV, RASPBERRY PI *May. 2022 – April 2023*

- Designed and developed a device to translate physical text to braille in real-time using **computer vision** and **deep learning**
- Implemented contour detection, noise removal, and adaptive threshholding algorithms to pre-process images

**Real-Time Executive Operating System**

C, ASSEMBLY, ARM CORTEX-A9 *Jan. 2021 – April. 2021*

- Designed a RTX kernel for the **Intel DE1-SoC** board populated with a dual-core **ARM Cortex-A9** processor and **Altera FPGA**
- Implemented task and memory management, inter-task communication, and real-time scheduling using **C** and **Assembly**

## Education

**University of Waterloo** *Waterloo, ON*

BACHELOR OF APPLIED SCIENCE IN COMPUTER ENGINEERING *Sept. 2018 - April 2023*