

Danish Khalled

Big Data & Database Engineer

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PROFESSIONAL SUMMARY

Computer Science graduate specializing in **Big Data** with strong expertise in **Database Management** and **Data Automation**. Proficient in designing scalable schemas using **PostgreSQL** and **Firebase** (NoSQL). Experienced in building automated data pipelines with **Python** and **VBA**, and leveraging **Dialogflow** for NLP data processing. Passionate about transforming raw data into actionable insights through efficient modeling and engineering.

TECHNICAL SKILLS

- **Data Engineering:** Python (Pandas), ETL Pipelines, MapReduce, Data Mining, Excel VBA (Macros)
- **Database Management:** PostgreSQL, MySQL, Firebase Firestore (NoSQL), Prisma ORM, Schema Design
- **Cloud & DevOps:** Google Cloud Platform (Dialogflow), Docker, GitHub Actions (CI/CD)
- **Languages:** SQL, Python, JavaScript, TypeScript, C#, Java, HTML/CSS
- **Methodologies:** Domain-Driven Design (DDD), Test-Driven Development (TDD), Agile/Scrum

EDUCATION

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| University of Wollongong <i>Bachelor of Computer Science (Big Data)</i> <i>Relevant Coursework: Big Data Management, Database Systems, Data Mining, Software Engineering</i> | Singapore Jan 2024 – Jun 2025 |
| Nanyang Polytechnic <i>Diploma in Game Development & Technology</i> | Singapore 2018 – 2021 |

KEY DATA PROJECTS

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| The Neural Network (Database Architecture) Video Link Github Repo Link • Designed and implemented a normalized PostgreSQL relational database schema to support a C2C platform. • Utilized Prisma ORM to enforce strict type safety and data integrity across complex entity relationships. • Architected the Data Persistence Layer using Domain-Driven Design (DDD) to ensure scalable data access. • Developed automated testing pipelines for database transactions to prevent data anomalies. | 2025 |
| ChatTots (AI & NoSQL Data Modeling) Video Link Github Repo Link • Modeled a scalable NoSQL database (Firestore) to store unstructured user interactions and content metadata. • Integrated Dialogflow (NLP) to analyze natural language inputs, converting text into structured query data. • Built an Analytics Dashboard to visualize user engagement metrics and content performance. | 2025 |
| osu! Thumbnail Generator (Data Extraction Pipeline) Github Repo Link • Developed a Python-based ETL tool that extracts raw gameplay data via the osu! API v2 . • Automated the processing of JSON payloads (player stats, beatmap metadata) to dynamically render visual assets. • Eliminated manual data entry by creating a script that parses, cleans, and formats API responses. | Personal |
| CNB Anti-Drug VR Game Game Programmer (FYP) Video Link Github Repo Link • Developed an immersive Virtual Reality game using Unity and Google Cardboard for CNB. • Implemented core VR mechanics including gaze-based interaction and head tracking. • Optimized game performance for mobile devices via occlusion culling and baked lighting. | 2020 |

EXPERIENCE

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| Singapore Armed Forces (SAF) <i>Admin Support Assistant</i> | Singapore Oct 2021 – Oct 2023 |
| • Engineered Excel VBA macros to automate the extraction and transformation of personnel data, reducing manual processing time by 40%. • Designed automated reporting tools to filter and format large datasets for unit readiness analysis. • Maintained data accuracy across unit records by implementing validation scripts within Excel forms. | |
| Nanyang Technological University <i>Game Development Student Intern</i> | Singapore Mar 2020 – May 2020 |
| • Programmed data interaction logic using C# and Unity , processing real-time sensor data from Kinect SDK. • Collaborated on optimizing code performance for real-time tracking systems. | |

AWARDS

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| • Best Soldier of the Month (SAF PERS HUB) | May 2023 |
| • EAGLES Award (Leadership & Service) | 2016 & 2017 |