ILIYAS ALABDULAAL

(+966) 56-298-8381 | iliyas.nedhal@gmail.com | LinkedIn | GitHub

EDUCATION

King Abdullah University of Science and Technology (KAUST) **Anticipated: December 2025**
Master of Science, Computer Science

University of Wisconsin-Madison **May 2024**
Bachelor of Science, Computer Science and Minor in Data Science

- *GPA: 3.99/4.0 (Graduated with Distinction – Summa Cum Laude)*

EXPERIENCE

Sirdab (YC W23) **June 2024 – Present**
Data Engineer *Riyadh, Saudi Arabia*

- Owned the design and development of end-to-end data solutions that automated 95% of multiple inventory audit workflows using PostgreSQL, Python, JavaScript, and GCP
- Built and owned multiple labeling and forecasting data pipelines, including SQL model development, statistical testing in Python, and collaborating with software teams to implement them into Sirdab portals
- Developed and debugged multiple data models with complex SQL queries and Python scripts to extract KPI insights, utilized in ELT processes, and utilize in dashboard creation for operations and business teams
- Optimized SQL performance and query efficiency by implementing indexing, partitioning, and query restructuring techniques, resulting in a 40% reduction in data processing times across GCP BigQuery and PostgreSQL environments
- Built and maintained various ELT pipelines using Airbyte to integrate different sources of data into a centralized data warehouse in GCP BigQuery
- Migrated multiple data models from Metabase on-the-go SQL to BigQuery SQL scheduled queries resulting in 95% faster data model loading time for analysis and visualization
- Conducted regular audits of data models and tables to ensure data accuracy, consistency, and optimal presentation for analysis and decision-making

PBS Wisconsin **January 2024 – May 2024**
Software Engineer (CS Capstone Project) *Madison, Wisconsin*

- Designed, developed, and deployed a captioning file to transcript transformer utilizing React, Express, Node.js, and CSS, automating 90% of PBS content managers' workflows
- Managed project's Agile software development with 4 other team members through JIRA, Scrum, and Kanban
- Designed UI prototype using Figma and interviewed 10+ potential users to incorporate feedback into development

Aramco Americas **May 2023 – August 2023**
Software Engineer Intern *Detroit, Michigan*

- Led the design and deployment of a key RESTful full-stack application using React with Node.js and Python with Django which automated manual processes like distillation curve plotting and fuel property comparisons, enhancing research scientists' data analysis and machine learning workflows efficiencies up to 80%
- Collaboratively integrated a deep neural network in Python and Node.js, achieving an average of 98% accuracy in predicting distillation curves from chemical fuel compositions
- Built multiple RESTful API endpoints using Axios and Django REST Framework, facilitating seamless communication between the server and 100 researchers
- Optimized user experience by implementing interactive data visualizations using Chart.js and designed a user-centric frontend UI with Material UI

UW-Madison Vertical Research Group **January 2023 – May 2023**
Undergraduate AI Researcher *Madison, Wisconsin*

- Coded and trained a quantized convolutional neural network in Python, achieving 98% accuracy. Utilized the model's quantized weights in a C-based LeNet-5 implementation to optimize it for the RISC-V compiler architecture
- Analyzed the behavior of C programs with odd memory accesses when run on RISC-Vs compiler architecture

Dow Chemical Inc. **June 2022 – August 2022**
Software Engineer Intern *Thuwal, Saudi Arabia*

- Developed the Cool Roof Energy Calculator web application, using JavaScript, HTML5, and CSS3, providing valuable energy efficiency and total cost insights for B2B Dow customers
- Utilized marketing call notes to construct a text-data manipulation, analysis, and visualization pipeline utilizing Power BI and SAP HANA, which automated manual tasks and reduced analysis time from 6 hours to 5 minutes
- Built and tested multiple features for the next-gen version of an internal application on Power Apps

SKILLS

Programming Languages: Python, C, Java, SQL, Go, HTML5, CSS, JavaScript, R
Dev Tools: Git, Docker, React/Express/Node.js, Django, Linux, JIRA, REST APIs, Selenium, Flask
Data Science & ML: PyTorch, Transformers, Pandas, Matplotlib, Scikit-learn, SciPy, NumPy
Data Engineering: MySQL, PostgreSQL, GCP, Spark, Cassandra, Kafka, PyArrow, Hadoop
Spoken Languages: Fluent in English, Japanese, and Arabic

PROJECTS

Network Intrusion Detection System | Python, PyTorch, NumPy **November 2023**

- Engineered a PyTorch-based multiclass classification neural network for accurate identification of diverse cyber threats using network traffic data
- Orchestrated data processing, model training, and validation loops, achieving 96% multi-class accuracy

Distributed Network File System | C, Unix, Networks, Git **December 2022**

- Deployed a client API library to manage multiple Linux filesystem images in a network, working in a team
- Devised the server that performs actions on the filesystem image which is called on by the client API

Airport Path Finder | Java, JavaFX, Dijkstra's Algorithm **November 2021**

- Collaborated with 3 other team members to build a full stack app that gives the user the shortest flight route from one US airport to another, as well as the price and total duration