

# Abdullah Joumani

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## ◊ Education:

- Bachelor of Computer Science in Artificial Intelligence and Machine Learning
- Carleton University, Ottawa, Canada
- Third Year Standing (Expected Graduation: 2027)

## ◊ Technical Skills:

- **Programming:** Python, Java, JavaScript, C, C++, SQL, HTML, CSS
- **AI & Machine Learning:** Natural Language Processing (NLP), BERT, Multitask Learning, Model Evaluation.
- **Backend & Systems:** Node.js, Deno, SQLite, PostgreSQL.
- **Databases:** Relational database design, SQL queries, PostgreSQL.
- Operating Systems: macOS, Windows, Linux.
- **Networking & Monitoring:** SolarWinds (NPM, NTA, NCM, SAM, UDT)
- **Software Engineering:** Object-Oriented Programming, Debugging, Optimization, Modular & Reusable Code

## ◊ Work Experience:

- Network Operations Center (NOC L1 Intern)  
NTT DATA, Riyadh, Saudi Arabia.  
(May 2024 - August 2024)
  - Monitored enterprise-scale networks using SolarWinds (NPM, NTA, NCM, SAM, UDT) to ensure system stability and uptime.
  - Built interactive monitoring dashboards to visualize traffic, device health, and performance metrics in real time.
  - Performed root cause analysis to diagnose network outages and performance degradation, reducing downtime by ~20%.
  - Improved troubleshooting workflows and alert response time by 30% through optimized reporting and monitoring procedures.
  - Collaborated with senior engineers to resolve routing, bandwidth, and connectivity issues across distributed systems.

## ◊ ACADEMIC & TECHNICAL PROJECTS:

**Sentiment & Sarcasm Detection System (NLP, Deep Learning)**

- Designed a hybrid NLP system to jointly classify sentiment (positive/negative) and sarcasm (yes/no) from real-world text.
- Implemented a BERT-based multitask learning model to capture contextual and linguistic cues beyond surface-level keywords.
- Trained the model on tens of thousands of labeled tweets and news headlines using HuggingFace Transformers.
- Enhanced sarcasm detection using a rule-based linguistic override layer that detects contradictions, exaggeration, and sarcastic phrasing.
- Achieved high classification accuracy and F1-scores, significantly outperforming classical TF-IDF baselines.
- Evaluated the system using confusion matrices, precision, recall, and F1-score to ensure robustness and reliability.

### **Database-Driven Management System**

- Designed and implemented a PostgreSQL-based backend for managing structured data.
- Created normalized schemas, optimized SQL queries, and ensured data integrity.

### **Web Server & Backend System**

- Developed a web server using Deno capable of handling concurrent client requests.
- Integrated SQLite for persistent data storage and efficient querying.
- Applied debugging and performance optimization techniques to improve reliability.

### **Data Processing & Visualization (Python)**

- Built Python scripts to process, analyze, and visualize large datasets.
- Designed modular, reusable pipelines for clean and scalable data handling.

## ◊ **COMMUNICATION & TEAMWORK:**

- Collaborated with classmates on team-based programming projects using Python and Git.
- Worked closely with engineers at NTT DATA to troubleshoot real production systems.
- Communicated technical findings clearly through dashboards, reports, and discussions.