Awwab Mahdi

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Experience

Department of National Defence Canada
January 2025 - August 2025
Data Science Developer
285 Coventry Rd., Ottawa, ON

Term 2

- Reworked an existing Protected B government application to replace Azure cloud services with local ones, and produced an exhaustive report on its capabilities
- Co-authored a research paper on the DocStructNet model, submitted for publication at ICPRAM 2026
- Used the AWS fmeval library, along with ECS, EC2, S3 and SageMaker to deploy a government chatbot with an evaluation pipeline

Term 1

- Implemented, trained, and tested an optimized 40M parameter document segmentation model(DocStructNet), with 97% accuracy on DocLayNet and PubLayNet datasets
- Wrote a custom GRPC client to interface with the Seamless translation model, and tested the model to determine BLEU score
- Tested and debugged a custom transformer based OCR model, and wrote comprehensive documentation for its codebase

IRM Consulting & Advisory
December 2023 - January 2024
AI Developer
Remote

- Finetuned an open source LLM from the Hugging Face model library that enabled GPU costs to be reduced by 90%
- Cleaned CIS Controls data from SCF, SOC II, CMMC and other cybersecurity frameworks
- Used LangChain and HuggingFace embeddings to build a file-based chatbot that was able to effectively interact with clients and respond to queries

eWorx Technology
September 2022 - June 2023
Mobile App Team Colead
Remote

- Studied Figma best practices and built several mock-ups to present to the client
- Translated Figma components into functional React Native components
- Used a provided REST API to integrate live data into the app

Education

Carleton University
September 2021 - December 2025
Bachelors of Computer Science
Cybersecurity Stream

Profiles

- a--ab.com
- AwwabM
- obliviance

Skills

Programming Languages

Python, Bash, JavaScript, C#, Java, C++, C, SQL

ML Technologies

PyTorch, Keras, TensorFlow, Nvidia Triton Server, LangChain

Web Technologies

HTML/CSS, React.js, React Native, Node.js, MongoDB

Developer Software

Git, Docker, Wireshark, Figma, WordPress, Unity

Other Technologies

Linux, Android, IP/TCP/UDP, Real Time Systems, Agile, Azure DevOps, CI/CD, Cloud Providers(Azure, AWS, GCP)

Publications

DocStructNet: A Foundational Model for Semantic Segmentation of Complex Document Layouts

Preprint (ICPRAM 2026)
September 2025

Languages

English
● ● ● ● ●

French
● ● ● ● ○

Urdu
● ● ○ ○ ○