

# Ashir Rashid

Abu Dhabi | [Portfolio](#) | [ar7789@nyu.edu](mailto:ar7789@nyu.edu) | [LinkedIn](#) | [GitHub](#) | +971568911927

## EDUCATION

### New York University Abu Dhabi

*B.S. in Computer Science; Minor in Applied Mathematics*

Abu Dhabi, UAE  
Estimated Graduation: May 2026

#### Relevant Courses

Algorithmic Foundations of Data Science, Network Security, Foundations of ML, NLP, Algorithms, Data Structures, Data Management and Analysis, Operating Systems, Computer Networking, Probability and Statistics, Linear Algebra

#### Certifications

AWS Certified Cloud Practitioner

Jan 2025 - Jan 2028

## PUBLICATIONS

"**Rethinking Evaluation of Multiple Sclerosis (MS) Lesion Segmentation Models**" A. Basit, **A. Rashid**, M. A. Hanif, M. Shafique Accepted at *IEEE IJCNN @ WCCI 2026*

## WORK EXPERIENCE

### GamaLearn

*Data Scientist*

Abu Dhabi, UAE  
May 2025 - May 2026

- Designed scalable ELT pipelines using Airflow to process **100,000+** records, enabling robust statistical modeling.
- Developed automated analytical **dashboards** to monitor Key Performance Indicators (**KPIs**) in near real-time, reducing reporting latency from ~1 hour to minutes and improving decision-making efficiency.
- Developed and rigorously **backtested** probabilistic models, including EM-based models, Gaussian Mixture Models, and Bayesian estimators using variational inference and MCMC to evaluate robustness and distributional stability.
- Improved out-of-sample predictive accuracy by **25%** and reduced Expected Calibration Error (**ECE**) by **30%** through model refinement and distribution-aware parameter optimization.

### eBrain Lab

*Deep Learning Research Assistant*

Abu Dhabi, UAE  
Aug 2023 - May 2025

- Built targeted synthetic datasets across **FLAIR, T1, and T2** modalities for **Minimum Functionality, Invariance, and Directional Expectation tests** to expose blind spots in existing losses and rigorously evaluate dataset coverage.
- Integrated **advanced loss functions**, including Generalized Surface Loss, to overcome the fundamental weaknesses of standard boundary-based and region-based segmentation losses, improving balanced accuracy by **~7%**.
- Engineered a flexible per-segment **evaluation framework** that applies metrics and losses at the lesion level, closing critical gaps in GSL and enabling far more precise **model diagnostics**.
- Enhanced energy and memory efficiency of **Deep Neural Networks** by **8.3%**, including **Large Language Models**, through implementing a state-of-the-art quantization framework, expanding on an existing open framework (HAQ).
- Optimized quantization configurations by applying **non-linear optimization** methods (**RL, Evolutionary Search, and DNAS**), improving model performance by **15%** and reducing hyperparameter search time by **43%**.
- Streamlined experiments with an **MLFlow-based MLOps** pipeline, reducing experiment iteration time by **12%**.

### Gantom Lighting & Controls

*Full Stack Engineer*

California, US (Remote)  
Jan 2022 - Jul 2023

- Built and deployed a scalable cloud-based web platform on **Google Cloud Platform** using Django and Firestore, managing **hundreds** of product entities with optimized data retrieval, increasing user engagement by **28%**.
- Applied database optimization and caching strategies to reduce latency by **22%**.

## OPEN-SOURCE EXPERIENCE

### IntelOwl

*Open-source OSINT solution for gathering threat intelligence data*

Jan 2023 - Present

- Fortified phishing defense capabilities by integrating the CheckPhish **API** with the dynamic React **front-end**.
- Rectified **system-level integration** and **CI/CD** bottlenecks, improving scalability and collaborative development.

## PERSONAL PROJECTS

*Source code for these projects is available on my GitHub*

- Gmail RAG - LangChain, LLMs: End-to-end RAG pipeline for Gmail data, enabling semantic search and retrieval.
- Better RAG - Elasticsearch, HPC: Using Information Extraction techniques to improve RAG retrieval accuracy.
- P2P File Sharing - Python, Sockets: A file transfer app utilizing a peer-to-peer approach, similar to BitTorrent.

## SKILLS

- Programming: Python, C++, C, SQL, PyTorch, TensorFlow, NumPy, Scikit-learn
- Modeling & Optimization: Bayesian Inference, MCMC, Variational Inference, EM, Gaussian Mixture Models, Reinforcement Learning, Evolutionary Search, Constrained Optimization
- Systems & Infrastructure: Airflow, MLflow, Docker, Kubernetes, AWS, GCP, PostgreSQL, Elasticsearch, HPC