

Bob Nti

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PROFILE

A highly accomplished AI Engineer and Applications Developer with over 20 years' experience in software engineering and AI-driven solutions. I specialise in generative AI and retrieval augmented generation systems, as demonstrated by my thesis on Enhanced Corrective Retrieval Augmented Generation (ECRAG) and the launch of the SyntaxMatrix package. I have a proven track record of increasing system efficiencies by up to 30% and reducing processing times by 20%, making my contributions highly impactful for operational performance and customer satisfaction. Passionate about bridging robust software development with advanced AI, I'm now targeting roles that leverage my expertise to drive innovative, scalable solutions in the AI space.

EDUCATION

- **MSc in Artificial Intelligence (1st Class Honours)**

National College of Ireland, Ireland | **August 2023 - August 2024**

- **Modules:** #Foundations of Artificial Intelligence, #Programming for Artificial Intelligence, #Data Analytics for Artificial Intelligence, #Data Governance and Ethics, #Engineering and Evaluating Artificial Intelligence Systems, #Intelligent Agents and Process Automation, #Artificial Intelligence Driven Decision Making, #Machine Learning, Emergent Artificial Intelligence Technologies and Sustainability, #Practicum (Thesis: <https://osf.io/npuva>)

- **Postgraduate Diploma in Computer Science**

Technology University of Dublin, Ireland | **September 2017 – May 2018**

- **Diplomas in Cloud Technologies & Microsoft Technology Associate**

Dublin Business School, Ireland | **September 2015 – May 2016**

- **BSc (Hons) in Computer Science**

University of Buea, Cameroon | **Completed in 1996**

PROFESSIONAL EXPERIENCE

AI Engineer / Data Scientist & Software Developer, DHL Ireland | August 2024 – Present

- Spearhead the design and deployment of advanced AI-driven predictive models, improving logistic process efficiency by 15% and reducing operational overheads by 20%.
- Oversee full-stack software development, integrating data science with robust backend solutions - resulting in a 10% cost reduction in IT operations.
- Coordinate cross-functional teams to deliver scalable and secure AI applications that support innovative business strategies.
- Expand upon the foundational models developed as a part-time Data Scientist, assuming broader responsibilities for end-to-end system design and enterprise-wide AI integration.

Part-time Data Scientist, DHL Ireland (while completing MSc Practicum) | August 2023 – August 2024

- Developed, tested, and fine-tuned AI algorithms in real-world logistics settings, laying the groundwork for the seamless transition to a full-time position.
- Improved data accuracy by 25% and optimised model inference times by 15%, significantly enhancing forecasting precision.
- Collaborated with senior engineers to pilot new tools and processes that streamlined operations and paved the way for further AI adoption within DHL.

Software Engineer, Mobile Telephone Network (MTN) Cameroon | June 2018 - July 2023

- Designed and implemented mission-critical applications serving over 5 million subscribers, achieving a 30% reduction in system downtime and a 25% improvement in processing speeds.
- Led cross-functional development teams of up to 10 engineers, resulting in a 20% boost in project delivery efficiency.

- Enhanced legacy systems with modern, scalable solutions that increased customer digital satisfaction ratings by 15%.

Software Engineer, Orange Cameroon | September 1999 - July 2015

- Engineered and deployed over 20 robust software solutions that optimised operational workflows, contributing to a 40% improvement in overall system performance.
- Directed multiple projects from conception to deployment, which improved customer experience and operational reliability by 15%.

Computer Science Teacher, Higher Technical Teachers' Training College, Kumba, Cameroon September 1996 - August 1999

- Delivered engaging curricula in computer science, equipping future educators with the skills needed in modern computing.
- Developed innovative teaching methods that increased student engagement and understanding by over 25%.

PROJECTS & OPEN-SOURCE CONTRIBUTIONS

Enhanced Corrective Retrieval Augmented Generation (ECRAG) – Thesis

- Developed an advanced retrieval augmented generation framework that reduced hallucination rates to 5% and increased retrieval accuracy by 94% through hierarchical sub-document embeddings and dynamic knowledge detection.

SyntaxMatrix Package

- Launched a Python package on PyPI designed to enable AI engineers and developers to easily add a web UI to their projects with a simple “pip install syntaxmatrix” and “import syntaxmatrix as smx”.
- Built with customisable themes and widget support to accelerate prototyping of AI applications.

Some GitHub Projects:

- **RAG:** Step-by-step tutorial on RAG app development. | github.com/bobganti/rag
- **HAAI:** Interactive chatbot serving as a personal health assistant | github.com/bobganti/haai
- **PDFURLAI:** A tool for conversing with document content | github.com/bobganti/pdfurlai
- **PDFAI:** An application for querying comprehensive company data github.com/bobganti/pdfai

TECHNICAL SKILLS

- **Programming Languages:** Python, C#, JavaScript, TypeScript, SQL
- **AI & Machine Learning:** Generative AI, Retrieval Augmented Generation, Deep Learning, NLP, Machine Learning
- **Frameworks, Libraries, Tools, and Technologies:** TensorFlow, PyTorch, Flask, Angular, ASP.NET Core, LangChain, Pandas, NumPy, FAISS, AWS, Docker, Git, Agile methodology
- **Web Development:** HTML, CSS, RESTful APIs
- **Data Analysis:** Statistical modelling, data visualisation

LANGUAGES

- English (Fluent)
- French (Fluent)

PROFESSIONAL AFFILIATIONS & INTERESTS

- Active contributor to open-source projects and engaged in continuous learning in AI and machine learning research.
- Passionate about advancing generative AI and developing scalable AI applications that drive business innovation.