Orbin Ahmed Acanto

https://orbin-portfolio.vercel.app/ • https://github.com/Orbin-Ahmed

+1 (929) 613-7738 • acantoahmed67@gmail.com

Queens • New York • NY

SUMMARY

Full-Stack Software Engineer specializing in AI/ML integration and business process automation with 4+ years developing production applications across healthcare, real estate, and enterprise sectors. Currently pursuing MS in Biomedical Informatics at Stony Brook University with hands-on research experience in transformer models (Stable Diffusion, BERT) and computer vision. Expert in Next JS, Django, Python, JavaScript/typescript, AWS cloud architecture, agentic AI workflows (N8N), RAG, LLMs and modern ML frameworks.

CORE SKILLS

Languages: Python, JavaScript/TypeScript, SQL, HTML/CSS

Data/ML: Pandas, NumPy, scikit-learn, PyTorch, TensorFlow, Transformers, LangChain, Pinecone

Automation & Integration: N8N, Make.com

Web & Frontend: React, Next.js, Tailwind CSS, Bootstrap

Backend & APIs: Django/DRF, Node.js, FastAPI, Celery, REST APIs, GraphQL

DevOps & Cloud: PostgreSQL, AWS (EC2, S3, RDS, CloudFront, ECS), Docker, Terraform

Dev Tools: Git/GitHub, CI/CD, Linux, Jest, pytest

WORK EXPERIENCE

Ideal Factory Apr 2024 – Present

Data Scientist Abu Dhabi, UAE

- **Accelerated design delivery by 95%** reduced mockup turnaround from 4 days to 60-120 minutes using AI-powered 3D design system with Blender, Stable Diffusion and YOLOv8 (93% floor plan detection accuracy).
- **Scaled production operations** generated 2,000+ 4K renders serving 30+ clients across 10-designer team, while reducing cloud rendering time by 80% through BEAM/Blender integration.

- **Automated entire business pipeline** built N8N platform that fully automated HR, Sales, and Design processes including lead collection, ERP logging, meeting scheduling, customer onboarding and automated quotation generation with human-in-the-loop approval workflows.
- **Delivered full-stack AI platform** engineered Next.js/Django applications with real-time AI model integration, deployed on AWS infrastructure (EC2, S3, RDS, CloudFront) with Docker.

Memorial Sloan Kettering Cancer Center Jun 2025 – Aug 2025

Summer Intern (AI/ML Team) New York, USA

- **Built and launched custom RAG solution** enabling clinicians to query 200+ page medical guidelines instantly, significantly reducing research time for patient care decisions.
- **Optimized AI system performance** through systematic benchmarking against industry-standard open-source alternatives, identifying key bottlenecks and improvement opportunities.
- **Led cross-functional integration initiatives** with clinical teams, product managers, and DevOps engineers to streamline AI tool adoption across hospital workflows.

Stony Brook University Nov 2024 – Jun 2025

Senior Research Assistant New York, USA

- **Enhanced DNABERT** with **multimodal embeddings** (sequence + physicochemical features), delivering a **16% lift in F1-score** on promoter prediction benchmarks.
- **Designed and deployed scalable data pipelines** for genomic analysis workflows, including species classification, pattern detection and regulatory mechanism identification.
- **Integrated stain segmentation** into the pathology pipeline HoVer-Net to produce cleaner nuclei boundaries and **stabilize downstream tumor classification**.
- **Built a breast-cancer WSI tumor-prediction pipeline** with standardized preprocessing (Macenko, reproducible tiling) and batched inference, improving runtime and cross-scanner stability.

Increments Inc May 2022 – Oct 2023

Software Engineer I Dhaka, Bangladesh

- **Produced SRS for 5 projects** (3 external clients, 2 internal), delivering **UML artifacts** (Use Cases, Activity, Sequence) that clarified scope and reduced back-and-forth during build.

- **Built market-leading platforms** - developed MakeMyMenu.io serving 100+ restaurants with 1,000+ daily users, and FindMyWorks supporting 200+ job seekers with integrated recruitment tools.
- **Engineered full-stack applications** - created scalable React.js/Django solutions with reusable components, REST APIs and AWS deployment (EC2, RDS, S3) ensuring production reliability.
- **Customized ERP systems** - developed well-documented ERPNext solutions with comprehensive testing protocols for enterprise business process optimization.

EDUCATION

Stony Brook University New York, USA

Master of Science in Biomedical Informatics Aug 2024 – Present

Lab Experience:

- **Dr. Davuluri's Lab:** Applied BERT models for DNA embedding generation, species classification, motif detection, and gene regulatory analysis.
- **Dr. Chen's Lab:** Implemented CellViT and HoVer-Net for pathological image analysis, cell classification, and tumor segmentation with spatial analysis.

BRAC University Dhaka, Bangladesh

Bachelor of Science in Computer Science & Engineering May 2022

PROJECTS

AI-Powered Clinical Knowledge Retrieval System | Python, LangChain, AWS, Terraform, Docker

- Designed and implemented a Retrieval-Augmented Generation (RAG) solution enabling clinicians to query complex, 200+ page BMT guidelines for patient care decision-making.
- Built secure document ingestion pipeline allowing clinicians to upload and index guideline documents for instant, context-aware AI responses.
- Containerized application using Docker and deployed on AWS ECS with Terraform for automated infrastructure provisioning and scalability.
- Integrated solution into the existing MSKCC AI portal, ensuring seamless user access and alignment with institutional workflows.

Enterprise Process Automation Platform | N8N, Python, Django, REST APIs, PostgreSQL

- Architected end-to-end agentic AI automation system streamlining HR, Sales, and Design workflows across multiple departments.
- Built intelligent workflows for lead collection, ERP integration, meeting scheduling, customer onboarding, and automated quotation generation with human-in-the-loop approval.
- Reduced manual processing time by 95% while ensuring data consistency and seamless cross-departmental collaboration.

3D Floor Planner | Next.js, Django, Python, PostgreSQL, Stable Diffusion, YOLOv8

- Built production-scale AI-powered design platform with 93% floor plan detection accuracy, serving 30+ enterprise clients
- Implemented computer vision pipeline using YOLOv8 for automated floor plan analysis and Stable Diffusion for 360-degree room redesigns
- Enabled 4K rendering of 3D scenes using WebGPU for high-quality visualization and developed modifiable 3D dollhouse views
- Deployed cloud rendering infrastructure reducing processing time by 80% while generating 2,000+ professional design renders

Drug Interaction Prediction Platform | Python, Graph Neural Networks, Django, PostgreSQL

- Built Graph Neural Network model to predict drug-drug interactions using DrugBank datasets and molecular structures
- Developed Django web application for healthcare professionals to predict interactions, view drug details, and enhance medication safety analysis

PUBLICATIONS

[1] “A hybrid approach to determine patient’s critical situation using deep learning algorithm” 2022 2nd International Conference on Computing and Machine Intelligence (ICMI), 2022.

ADDITIONAL INFORMATION

Residency Status: U.S. Permanent Resident

Recognition: Dean's Award for Academic Excellence, BRAC University