Orbin Ahmed Acanto

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Queens • New York • NY | US Permanent Resident

SUMMARY

Full-Stack Software Engineer specializing in AI/ML integration and business process automation with 5 years developing production applications across healthcare, real estate, and enterprise sectors. Completed MSc in Biomedical Informatics at Stony Brook University with hands-on research experience in transformer models (Stable Diffusion, BERT) and computer vision application. Expert in Next JS, React JS, Django, Python, JavaScript/typescript, AWS cloud architecture, agentic AI workflows (N8N/LangChain), 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

FIDI Hospitality Oct 2025 – Present

Web & AI Automation Engineer Long Island, NY

- Built an AI powered staffing agent to automate staff scheduling, timesheets, payroll generation and notifications, reducing manual workload by 80 percent. Implemented agentic workflows using LangGraph, with a full stack system built on Next.js, Django, PostgreSQL, role-based access control, API rate limiting and Celery for scheduled tasks.

- Developed AI powered floor plan automation tools using OCR and computer vision to convert static floor plans into intelligent digital layouts with automated interior placement, reducing design turnaround time by over 50 percent and enabling real time visualization in the web platform.

Ideal Factory Apr 2024 – Sep 2025

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 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.

Techynaf Technologies Limited Jun 2021 – Apr 2022

Software Engineer I Dhaka, Bangladesh

- Collaborated with a cross functional engineering team to design and build the first Bengali language ERP system using Django (REST APIs), React.js frontend components, and PostgreSQL, deployed on AWS with services such as EC2, S3, and RDS to support scalability and high availability.
- Contributed to a production platform adopted by over **1,000 active users across multiple government offices**, and supported recent **government and private funding acquisitions** driven by strong adoption, system stability, and continued feature development based on user feedback.

EDUCATION

Stony Brook University New York, USA

Master of Science in Biomedical Informatics Aug 2024 – Dec 2025

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 | LangGraph, Next JS, Python, Django, 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, task management 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.

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.

[2] “Augmenting DNABERT embeddings with multimodal DNA features for improved regulatory sequence interpretation” In Proceedings of the 2025 Machine Learning in Computational Biology (MLCB) Conference.