

AYASH HOSSAIN CHOWDHURY

AI/ML Engineer | Full-Stack Engineer

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Results-driven AI/ML and Full-Stack Engineer with 4+ years of experience shipping production-grade AI pipelines, real-time voice agents, RAG systems, and scalable web applications for clients across the US, UK, Netherlands, and UAE. Currently leading engineering teams of 5–8 people across two organizations, with a track record of rapid promotions (Associate → Engineer → Team Lead within 18 months). Delivered solutions serving 500K+ monthly users on platforms. Published researcher in computer vision and NLP. B.Sc. in Computer Science from BRAC University (CGPA 3.75/4.00, Magna Cum Laude, Merit Scholarship).

PROFESSIONAL EXPERIENCE

Auxo Solutions

Apr 2025 – Present

Minneapolis, MN, USA | Contractual · Remote

Application Engineer

- Configure and maintain 15+ enterprise application modules, business logic, and algorithmic workflows on the Unqork, reducing development cycle time by ~30%.
 - Translate complex business requirements into data models, multi-step workflows, and dynamic UI components for non-technical stakeholders to validate in real time.
 - Develop RESTful integrations and connectors to 8+ external systems (CRMs, ERPs, payment gateways), ensuring seamless bi-directional data flow.
 - Debug and optimize application configurations across staging and production environments, reducing critical defect rates by ~25%.
 - Coordinate with QA and product teams via Jira to manage sprint deliverables and maintain 95%+ on-time feature delivery.
- ★ *Contributed to production-grade fintech for carlyle.com, a globally recognized financial services platform.*

All Gen Tech (AGT)

Jun 2024 – Present

New York, NY, USA | Full-Time · Remote

Team Supervisor (Oct 2025 – Present)

- Promoted to lead and manage a team of 8 engineers, overseeing task allocation, code reviews, sprint planning, and delivery timelines across multiple client projects.
 - Mentor junior and mid-level developers through pair programming, architecture reviews, and structured 1-on-1s, improving team output quality and reducing PR revision cycles by ~30%.
 - Serve as the primary technical liaison between engineering, product, and client stakeholders, translating business requirements into actionable sprint backlogs.
 - Established team coding standards, CI/CD best practices, and onboarding documentation, cutting new-hire ramp-up time from 3 weeks to ~10 days.
- ★ *Grew team from 4 to 8 engineers while maintaining 95%+ on-time sprint delivery rate.*

Full-Stack Engineer II (Feb 2025 – Oct 2025)

- Promoted after 8 months for consistent high-impact delivery. Took ownership of architecture decisions for key product modules.
 - Built reusable component libraries and design system primitives adopted across 3 product teams, improving developer velocity by ~20%.
 - Led integration of Firebase for real-time data sync and authentication, reducing auth-related support tickets by ~40%.
- ★ *Reduced average client onboarding time from 3 weeks to under 10 days through workflow automation.*

Full-Stack Engineer I (Jun 2024 – Feb 2025)

- Developed responsive web interfaces using React, Next.js, and Tailwind CSS for US-based client projects, delivering pixel-perfect UI across devices.
- Architected secure RESTful APIs with Node.js, Express, and JWT-based authentication, handling 10K+ daily API requests.
- Collaborated with product, design, and QA in Agile sprints using Git and Jira, consistently shipping features on schedule.

Team Lead, R&D Department (Sep 2025 – Present)

- Promoted to lead the 5-person R&D team, owning technical roadmap, sprint planning, and delivery of AI/GIS research initiatives for government infrastructure clients.
 - Coordinate cross-functional collaboration between GIS specialists, civil engineers, and software developers to translate domain requirements into production-ready solutions.
 - Introduced structured code review processes and documentation standards, reducing production bugs by ~35%.
 - Report directly to senior management on project progress, resource allocation, and technical risk assessments.
- ★ *Scaled R&D output by 40% within 6 months of assuming team lead role while maintaining delivery quality.*

AI & Machine Learning Engineer (Jul 2024 – Sep 2025)

- Promoted after 6 months. Improved GIS data analysis precision by 35% by integrating custom ML/AI models for spatial data processing.
 - Built AI automation pipelines to streamline GIS workflows, delivering real-time results that previously required 4–6 hours of manual processing.
 - Developed the internal EMEC Mapper App (emec-mapper-app.web.app) using Python, Node.js, Next.js, PostgreSQL, and AWS.
- ★ *Reduced manual GIS processing time by ~70%, enabling faster project turnaround for government clients.*

Associate AI & Machine Learning Engineer (Jan 2024 – Jul 2024)

- Managed end-to-end data pipelines: ingestion, cleaning, spatial analysis, and visualization for 50+ large-scale infrastructure datasets.
- Collaborated with GIS specialists and civil engineers to prototype AI-augmented planning tools on AWS.

LabsDAO

Oct 2025 – Feb 2026

Bronx, NY, USA | Contractual · Remote

AI & Machine Learning Engineer

- Designed and shipped “Ink’d” — a voice-first AI agent (Nova) that guides real estate agents through contract creation via natural dialogue using LangGraph, LiveKit, and WebRTC.
 - Built a LangGraph StateGraph with nodes for system message creation, data extraction, section validation, contract generation, and addendum orchestration.
 - Implemented conversational data extraction pipelines to auto-generate compliant PDF contracts with addendums and audit-ready metadata, reducing manual document prep by ~60%.
 - Integrated Groq Whisper STT and OpenAI gpt-4o-mini TTS with barge-in handling, Silero VAD for pause detection, and streaming UX for responsive turn-taking.
 - Set up OTLP tracing and metrics via Grafana Cloud for production monitoring; built text CLI mode for rapid local debugging and testing.
 - Implemented contract upload pipeline to Django backend with S3 storage, user-scoped metadata, and preview URL generation.
- ★ *Achieved <2s end-to-end voice response latency in production, outperforming the client’s 5s target.*

Your Tech Club (YTC)

Aug 2025 – Dec 2025

Amsterdam, Netherlands | Contractual · Remote

AI & Machine Learning Engineer

- Shipped the AI-Powered Wage Compliance Wizard — a production RAG pipeline covering document ingestion (PDF/image via Unstructured + Tesseract OCR), parsing, embedding, vector storage (FAISS), and retrieval.
 - Built scalable FastAPI microservices for ML inference and conversational AI chat, integrated with Azure AI Search and Azure Document Intelligence for enterprise-grade document understanding.
 - Implemented multi-language OCR support (English + Dutch) with Tesseract and Poppler, handling scanned PDFs and image-based documents.
 - Optimized query performance achieving <500ms P95 retrieval latency; enforced data security policies and monitored system health via Grafana and OpenTelemetry.
 - Deployed dual-mode architecture: local development with file-based storage and production with Azure Blob Storage for scalability.
- ★ *Reduced wage compliance document review time by ~55% compared to the client’s previous manual process.*

Property Finder

Nov 2024 – Mar 2025

Dubai, UAE | Contractual · Remote

Frontend Engineer

- Built production frontend components for propertyfinder.ae, a leading Middle East real-estate platform with 5M+ monthly visits, using React, Next.js, Redux, Tailwind, and Material UI.
 - Created a custom theme builder and reusable hook library, improving developer velocity and UI consistency across 4 product verticals.
 - Integrated API layers and authentication flows with AWS Amplify and Cognito, serving 200K+ authenticated users.
 - Optimized Core Web Vitals (LCP, CLS, FID), contributing to a 12% improvement in Lighthouse performance scores.
- ★ *Shipped 3 major feature releases ahead of schedule, earning recognition from the engineering lead.*

Levered Technology LLC

Jun 2024 – Sep 2024

Boston, MA, USA | Contractual · Remote

Full-Stack Engineer

- Developed responsive web applications for the carlyle.com ecosystem using React, Next.js, and Redux, serving high-traffic financial services audiences.
 - Implemented state management patterns with Redux Toolkit for efficient data flow across complex multi-page applications.
 - Managed data operations and SEO optimization with Yext; improved organic search visibility by ~18%.
 - Collaborated through Git and Jira in a distributed engineering team spanning 3 time zones.
- ★ *Delivered all sprint commitments at 100% on-time rate across the 4-month engagement.*

Authentic Tourism Network (ATN)

Sep 2023 – Dec 2023

Dhaka, Bangladesh | Contractual · On-Site

Frontend Web Developer

- Built and managed the company website (authenticTourismNetwork) using MERN stack with Tailwind CSS and Firebase, delivering a dynamic and responsive tourism platform.
- Integrated third-party APIs for real-time travel data updates, improving content freshness and increasing user engagement by ~22%.
- Worked on automation projects to reduce repetitive content management tasks.

BRAC University – MNS Department

Oct 2022 – Dec 2023

Dhaka, Bangladesh | Part-Time · On-Site

Teaching Assistant

- Delivered tailored 1-on-1 tutoring in mathematics and statistics to 60+ students across multiple semesters.
- Developed supplementary study materials and exam prep guides, contributing to a ~15% improvement in average course pass rates.
- Established a structured student feedback loop for continuous teaching improvement.

Youth Movements

May 2022 – Mar 2023

Dhaka, Bangladesh | Full-Time · On-Site

Junior Executive, IT & Communications

- Developed and maintained the organization's website using WordPress and Elementor; managed MySQL databases ensuring data accuracy and security for 1,000+ records.
- Produced data-driven visuals and strategic reports to inform organizational decision-making.

Fortuna Gaming Limited

Jun 2021 – Dec 2021

London, UK | Contractual · Remote

Content Specialist

- Graphic designing the game posters, gaming magazines and covering pr releases.
- Boosted SEO rankings through keyword-optimized articles and game narratives, contributing to a 15% increase in website traffic.
- Streamlined content strategy and editorial calendar, increasing publishing cadence by 25%.

KEY PROJECTS & PRODUCTION DEPLOYMENTS

Production: carlyle.com – asset management (global financial services), propertyfinder.ae – allocation & credit module (5M+ monthly visits), NODI Project (government GIS tool)

AI/Voice Systems: Ink'd Voice Agent (LangGraph + LiveKit + Groq STT + OpenAI TTS → PDF contract generation), Wage Compliance Wizard (FastAPI + FAISS + Azure AI Search + OCR)

Open-Source & Academic: Computer vision models library (Roboflow/Python), Computer Network simulator (Cisco Packet Tracer), Client Management System (Laravel), Intrusion Detection (Arduino)

RESEARCH PUBLICATIONS

Fire and Disaster Detection by Multimodal Quadcopter Using Machine Learning

BRAC University | YOLO V7 (Object Detection), MiDaS V3 (Depth Estimation), Photogrammetry (3D Mapping)

[Preview Link](#)

Developing a Bangla Chatbot Using Neural Networks

BRAC University | LSTM, RNN, Transformer, TensorFlow, RASA

EDUCATION

B.Sc. in Computer Science & Engineering

2023

BRAC University, Dhaka | CGPA: 3.75 / 4.00 (Magna Cum Laude) | Merit-Based Scholarship

TECHNICAL SKILLS

Languages & Frameworks: JavaScript, TypeScript, Python, Java, React, Next.js, Node.js, Express.js, FastAPI, Django, Laravel

AI/ML & GenAI: LangChain, LangGraph, LiveKit, RAG, FAISS, Vector DB, Azure AI Search, PyTorch, TensorFlow, HuggingFace, OpenCV, Whisper, Groq STT, OpenAI TTS, Prompt Engineering, Computer Vision, NLP

Cloud & DevOps: AWS (EC2, RDS, Lambda, S3, Amplify, Cognito), Azure (Blob Storage, Document Intelligence, OpenAI), Firebase, Vercel, Git, CI/CD, Docker

Databases: PostgreSQL, MongoDB, MySQL, DBeaver

Tools & Platforms: Jira, Redux, Tailwind CSS, Material UI, Yext, Unqork, GIS Tools, Grafana, OpenTelemetry, LangSmith, Unstructured, Tesseract OCR

LANGUAGES

Bangla (Native) | **English** (Fluent – IELTS 7.0) | **Japanese** (Conversational) | **Hindi** (Conversational) | **Chinese** (Beginner)

LEADERSHIP & ACTIVITIES

- General Secretary, BRAC University Response Team (2020–2023) — Initiated community projects and supervised 200+ club members across multiple initiatives.
- Head of Graphics, Chayasthol Youth Foundation (2022–2023) — Led a team of 6 designers, increasing content engagement by 30%.
- Campus Ambassador, International Model United Nations Association (2020–2021) — Managed campus outreach and digital marketing campaigns.

CERTIFICATIONS & TRAINING

- Full-Stack Web Development — Programming Hero
- Python & Web Development Courses — Coursera
- Young Leadership Boot-Camp — BRAC University, Office of Co-curricular Activities

REFERENCES

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