AYUSH VELHAL

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EDUCATION --

University of Texas At Dallas │ Bachelor of Computer Sciece   **Expected May 2027**

CERTIFICATIONS--

Cloud Practioner - AWS Completed AWS Cloud Practitioner Essentials on August 3, 2025, gaining a solid foundation in AWS services, infrastructure, security, and pricing—my first step toward advanced AWS certifications and cloud projects.

Python For Data Science & AI - IBM Completed Python for Data Science and AI by IBM on August 31, 2025, gaining hands-on experience with Pandas, NumPy, Matplotlib, and foundational machine learning and AI applications

Full Stack Developer - Meta Built and deployed full-stack web apps using Django, MySQL, HTML, CSS, and JavaScript; enhanced backend and deployment expertise.

Cybersecurity Professional Certificate (Ongoing) - Google Actively completing 9-course series; 3 done, expected completion Dec 2025

SKILLS---

Languages: Python, Java, C#, C++, JavaScript, HTML, CSS
Frameworks & Tools: React, Tailwind CSS, Flask, Streamlit, OpenPose, MediaPipe, TensorFlow, LangChain, FAISS, Django
Technologies: AWS, GitHub, Firebase, Agile Development, Microsoft Office, Power BI, Visio, Data Analytics, Data Science, Data Engineering, UX Design, Cybersecurity Fundamentals, Software Engineering, Cloud Computing, Full Stack
Soft Skills: Leadership, Problem-Solving, Teamwork, Adaptability, Professional Communication, Project Management,Analytical Thinking, Creativity, Organization, Time Management, Curiosity, Fast Learning, Community Involvement

LEADERSHIP & EXPERIENCE--

Research Assistant │ Doc2OracLL under Prof. Soneya Binta Hossain   10/2025 — Present

- Worked with a PhD professor to investigate how Javadoc code documentation influences Large Language Models (LLMs) in automated test oracle generation (TOG) for software testing.
- Fine-tuned multiple code-specific LLMs (CodeGPT, CodeParrot, CodeLlama, etc.) using the SF110 benchmark dataset of 110 open-source Java projects to measure accuracy improvements from developer and AI-generated documentation.
- Analyzed the contribution of Javadoc components (description, @return, @param) to LLM performance, discovering that concise and well-structured documentation significantly increases oracle accuracy.
- Contributed to building and testing automated Javadoc generation and call-graph tools using Gemini and OpenAI models, supporting advancements in AI-driven code understanding, bug detection, and software quality assurance.

BROTHER │ KAPPA THETA PI (KTP)   02/2025 — Present

- Active brother in Kappa Theta Pi, a professional technology fraternity at UT Dallas.
- Participate in workshops, mentorship programs, and networking events to enhance technical and professional skills.
- Collaborate with members on real-life projects to gain hands-on experience in computer science and emerging technologies.
- Develop leadership, teamwork, and communication skills through active fraternity involvement.

Technology Officer │ Amazon Web Services (AWS Club)   09/2025 — Present

- Lead interactive workshops introducing students to cloud computing and AWS services through real-world demos and labs.
- Teach members how to deploy, manage, and scale applications using core AWS tools.
- Help students prepare for AWS certifications by simplifying complex cloud concepts and sharing study resources.

Additional Involvement   08/2024 - Present

- Additional Involvement: Project Lead – AIMD │ Mentee – ACM Mentorship Program │ Events Officer – Marathi Mitra Mandal │ Social Media Manager – Comet Cricket Club (CCC)

PROJECTS --

Personal Portfolio │ Website   08/2025 - 09/2025

- Designed and developed a personal portfolio website using Streamlit to showcase projects, certifications, and technical skills in an interactive and visually appealing format.
- Integrated GitHub repositories to display live project links, source code, and version history for transparency and accessibility.
- Continuously update the site to reflect new achievements, ensuring it serves as a central hub for my professional and academic journey.
- Added a "Tech Nexus" section highlighting technologies like Streamlit, AWS, and AI tools, along with examples of their real-world applications in my projects

TarkAI │ Full Stack Project   04/2025 — 04/2025

- Earned **2nd Place in HackAI 2025** (LTIMindtree Challenge) for innovation, usability, and real-world problem-solving impact.
- Designed an AI-driven document analysis system that extracts and summarizes key insights from academic, financial, and career related PDFs using Retrieval-Augmented Generation (RAG).
- Built an interactive Streamlit interface enabling users to upload documents, ask context-based questions, and receive AI-generated answers with cited sources.

Analytico │ Social Media Analytics Tool   02/2025 - 05/2025

- Developed a social media analytics platform to automate data collection and analyze engagement metrics such as reach, likes, and audience behavior.
- Integrated OpenAI API to generate personalized insights, recommend optimal posting times, and suggest AI-driven content strategies for growth.
- Designed an interactive dashboard with filters, graphs, and visualizations to track performance trends across multiple platforms.

PosePerfect │ AI Fitness Posture Assistant   01/2025 - 05/2025

- Created an AI-powered fitness tool that analyzes workout videos and provides real-time feedback on body posture and form accuracy.
- Built the React frontend for file uploads, result visualization, and user interaction, connected to a Flask backend for pose estimation using MediaPipe and TensorFlow.
- Integrated OpenAI API to deliver personalized suggestions for improving workout techniques and preventing injuries. Added login, signup, and dashboard features to track progress, session history, and performance over time