AKSH DHINGRA

Education

Indian Institute of Information Technology, Gwalior

Bachelor of Technology in Computer Science

Aug. 2023 – May 2027

Madhya Pradesh, India

Relevant Coursework

• Data Structures

- Algorithm Analysis
- Computer Architecture
- Software Engineering

• OOPs

• Database Management

• Operating Systems

Projects

CodeSync | Node.js, Express, MongoDB, AWS, Passport.js, JWT, Socket.IO, React

Feb. 2025 - Present

- Engineered a real-time collaborative code editor enabling multi-user live coding sessions with synchronized folder structures and language selection.
- Executed real-time code synchronization using Socket.IO, ensuring low-latency updates across multiple users.
- Designed and integrated persistent storage with AWS S3, enabling efficient file storage and retrieval for user projects.
- Enhanced authentication with JWT, including email verification for password reset functionality, enhancing security and user account recovery.

<u>VideoTube</u> | Node.js, Express, MongoDB Atlas, Passport.js, JWT, Cloudinary

Dec. 2024 - Jan. 2025

- Created a scalable Video Streaming API using Node.js enabling users to upload, process, and stream videos in multiple resolutions.
- Implemented 10+ core features, including video uploads, HLS streaming, authentication, user management, playlists, subscriptions, likes, comments, and community posts to enhance user engagement.
- Handled video uploads up to 2GB, processed into three quality levels (1080p, 720p, 480p) for smooth HLS streaming via Cloudinary.
- Optimized database queries using indexing and aggregation pipelines, achieving approximately 50% faster response times for frequently accessed data.
- Secured user authentication and authorization with Google OAuth and JWT, reducing unauthorized access risks by over 90%.

<u>DinoRun Game</u> | JavaScript, HTML5 Canvas, CSS

Oct. 2024

- Developed a browser-based Dino Run game using JavaScript and HTML5 Canvas, implementing obstacle spawning and collision detection.
- Designed smooth jump mechanics and smooth background scrolling for a dynamic visual effect.
- Improved game performance by using requestAnimationFrame for animations.

Technical Skills

Languages: JavaScript, Java, CPP.

Tools & Technologies: AWS, EC2, S3, Lambda, Docker, NodeJS, Express, MongoDB, MySQL, React, oAuth, Websockets, JWT .

Achievements

- Solved over 700 data structures and algorithms problems on **LeetCode**.
- Currently have a CGPA of **8.84** (up to the 3rd semester).
- Achieved a 1700+ rating in LeetCode contests.
- Secured an All India Rank of 8113 in JEE Advanced and a 99.2 percentile in JEE Mains.