Aditya Chauhan

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DOB: 14 June, 2004
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GitHub | LinkedIn | Codeforces | Leetcode

Education

Indraprastha Institute of Information Technology, Delhi — CGPA: 7.28
B.Tech (Electronics and VLSI Engineering) — 2022 - present

- Secured a perfect **10 SGPA** in Summer Term II.
- Secured **10 CGPA** in Competitive Programming I and Electronics System Design.
- Studied useful **Technical Courses** including Data Structures and algorithms, Linear Algebra, Object Oriented Programming, Machine Learning, Front End and Back End Web Development, Modern Algorithm Design, Database Management Systems, Version Control Systems, FPGA, SoC System Design .

Delhi Public School, Nerul, Navi Mumbai — Percentage : 91%
CBSE, Class 12th, PCM+CS — 2022

Skills

Expertise Area:	Data Structures and Algorithms, Machine Learning, Competitive Programming, Android App Development, Web Development, API Handling.
Languages:	C++ with STL, Java, Verilog, Python, JavaScript, Kotlin, C, HTML, CSS, SQL, Bash, Haskell.
Tools and Technologies:	Android Studio, Linux, React JS, Node Js, MATLAB, Verilog/VHDL, Eagle CAD, Keras, Pytorch, Tensorflow, MongoDB, Arduino, Google Collab, Kaggle, Pandas, Numpy, Matplotlib, MySQL, LaTeX, Adobe XD, LibGDX, Git/Github.

Relevant Certifications

Machine Learning Specialization, **Stanford Online** — Apr 2023 - July 2023
Guide: Dr. Andrew Ng

- Aced the course with **96.6 percent** overall. Certification
- Included Supervised Machine Learning: Regression and Classification, Advanced Learning Algorithms, Unsupervised Machine Learning: Recommenders and Reinforcement Learning.

Web Development Specialization, **Meta** — Nov 2023 - Dec 2023
Guide: Meta Staff

- Completed courses : Version Control, Programming With JavaScript, Front End Development with 95 percent overall.

Projects

Decentralised File Storage System using GoLang [Source Code]

- Developed a **fully distributed content-addressable file storage system** using Go, designed to handle and stream very large files efficiently.

- Implemented a **decentralized architecture** utilizing a peer-to-peer network for distributed file storage, enhancing scalability and fault tolerance.
- Integrated **streaming capabilities** to support efficient handling of large files, along with **encryption** for secure storage and retrieval.
- Designed the system for **fault tolerance**, allowing it to handle node failures gracefully, and **scalability** by enabling easy addition of new nodes to the network.
- **Tech Stack:** Go, TCP/IP, Encryption algorithms, Distributed systems concepts.

Meditation App [Source Code]

- Developed a **cross-platform mobile application** using React Native and Expo, designed to deliver a seamless and intuitive user experience.
- Implemented advanced UI components including **FlatLists, Linear Gradients, modals, and tab bars**, enhancing the app's visual appeal and functionality.
- Utilized **Expo Router** for efficient file-based routing, improving navigation and overall app structure.
- Integrated **NativeWind** for streamlined styling, combining the power of Tailwind CSS with React Native's styling system.
- **Tech Stack:** React Native, Expo, JavaScript, TypeScript, NativeWind.

SOTA Image Segmentation [Source Code]

- Implemented a **state-of-the-art image segmentation model** using TensorFlow 2, demonstrating proficiency in advanced computer vision techniques.
- Utilized **deep learning architectures** specifically designed for pixel-wise image segmentation, such as U-Net or FCN (Fully Convolutional Networks).
- Preprocessed and augmented image datasets to improve model generalization and performance on diverse visual inputs.
- Optimized the model using techniques like transfer learning and fine-tuning to achieve high accuracy in segmenting complex images.
- **Tech Stack:** Python, TensorFlow 2, Keras, NumPy, OpenCV, Matplotlib for visualization.

Stick Hero - Video Game [Source Code]

- Engineered a **desktop clone** of the popular mobile game Stick Hero, leveraging the **JavaFX framework**, Box2D physics engine, and Scene2D for robust gameplay and graphics rendering.
- Implemented advanced **Object-Oriented Programming principles**, including abstraction, polymorphism, and encapsulation, to ensure clean, maintainable, and scalable code architecture.
- Integrated **JUnit testing** to maintain code quality and reliability throughout the development process.
- Applied software **design patterns** to solve common programming challenges and improve code structure.
- **Tech Stack:** Java, JavaFX, LibGDX, Box2D, Scene2D, JUnit, FFMPEG for multimedia handling.

Awards and Achievements

- Specialist on Codeforces, Rating: 1442.
- JEE Main 2020: 98.61 percentile
- Secured a global rank of 32 out of 20,000 people in CodeChef Starters 140

Interests and Hobbies

- Competitive Programming
- Algorithmic Puzzle-Solving
- Weight-Lifting

Declaration: The above information is correct to the best of my knowledge.
Aditya Chauhan
Date: December 21, 2024