Atul Kumar

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Summary

Dedicated IIT Madras Data Science undergraduate with a strong emphasis on backend development in Python and Flask. Proven ability to design scalable RESTful APIs, build backend-driven web applications, and deploy data-centric solutions with a production-oriented mindset. Actively seeking a paid backend internship to contribute to impactful engineering teams.

Projects

YouTube Video Downloader
Built a web-based YouTube downloader using Flask and yt-dlp that allows users to preview videos, select formats (MP4, WEBM, MP3), and download content efficiently. GitHub Repository

Daily Time Block Planner

Developed an interactive productivity planner using HTML, CSS, and Vanilla JavaScript. Implemented gamified task prioritization logic to improve focus and habit consistency. GitHub Repository

Protein Secondary Structure Prediction (Deep Learning)

Designed a custom CNN-BiLSTM model to predict protein secondary structures (Q3 & Q8) with 75–80% accuracy. Deployed a production-ready inference pipeline with live experiment tracking. HuggingFace Demo

Age & Gender Prediction

Built a Kaggle competition solution using PyTorch Lightning with dual CNN architectures (custom CNN + EfficientNetB3). Achieved 0.85+ leaderboard score through ensemble learning. HuggingFace Demo

Score Calculator – Course Grade & Eligibility Checker

Created a responsive grade calculator using HTML, Tailwind CSS, and JavaScript for instant score computation and eligibility checks. Live Application

Skills

Python (Advanced), Flask, REST APIs, JavaScript, SQL (Advanced), MySQL, SQLite, PyTorch, TensorFlow, Git, GitHub, Backend Web Development

Certifications

SQL (Advanced) – HackerRank
Problem Solving (Intermediate) – HackerRank
Python – HackerRank
CSS (Basic) – HackerRank

Education

Indian Institute of Technology Madras
BS Data Science & Applications (2024–2028) – Currently Pursuing

Class XII – Resonance International School (2024) – 73.4%
Class X – Global International School (2022) – 76.6%