

Dhruv Kumar Singh

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EDUCATION

Vellore Institute of Technology
Bachelor of Tech in Computer Science, CGPA: 8.19
AECS NARORA
Schooling

Bhopal, MP
May 2023 – May 2027
Narora, UP
June 2011 – April 2023

EXPERIENCE

Python Data Engineer Intern

Feb 2025 – April 2025

Legal Gini

Remote, New Delhi

- Designed a web crawler using Python, Selenium achieving a 50% increase in efficiency for data mining
- Engineered an automated data pipeline with parallel processing, boosting workflow speed by 500%.
- Deployed an AI agent to actively monitor workflow logs 24/7, providing instant feedback.
- Optimized vectorization and data upload to AWS S3 Buckets, accelerating model training.

Software Engineer Intern

Jan 2025 – Feb 2025

Elite Forums

Remote, Mumbai

- Built an event platform with React, Redux, and Tailwind, boosting engagement by 25%.
- Developed RESTful APIs (Django/Flask) with WebSocket integration, cutting response times by 25%.
- Optimized PostgreSQL/MySQL schemas, improving query performance by 30%.
- Integrated key services (Stripe, Twilio, Zoom) to raise user satisfaction by 20%.
- Secured apps with OAuth/RBAC and streamlined deployments via GitHub Actions on GCP, reducing cycles by 50%.

PROJECTS

Neural Image Caption Generator | *Python, TensorFlow, InceptionV3, LSTM*

March 2025 – June 2025

- Built a model that uses InceptionV3 (CNN) to "see" images and an LSTM to write captions.
- Added attention so the model learns to look at the most important parts of each image.
- Prepared and cleaned the Flickr8k dataset, including turning words into tokens and padding sequences.
- Tuned training settings to reach strong results (BLEU-40.41, ROUGE-L0.53).

Ecommerce Web app | *MongoDB, React.js, Node.js, Express.js*

Feb 2025 – March 2025

- Developed a full-stack MERN e-commerce app with secure token authentication.
- Integrated Stripe for payments, Cloudinary for media, and Redis for caching.
- Managed configurations via a robust .env file for secure deployments.

Automated Web Scraping Pipeline | *MongoDB, React.js, Node.js, Express.js*

Dec 2024 – Feb 2025

- Architected a robust data pipeline with Selenium, Scrapy, and BeautifulSoup, ensuring 99.9 percent uptime and zero data loss
- Streamlined data preprocessing, accelerating read operations by 10 percent.
- Developed AI models to bypass reCAPTCHA within 7 seconds for uninterrupted data extraction.
- Enhanced versatility by supporting multiple data formats: text, graphs, tables, and AI-summarized reports.

TECHNICAL SKILLS

Languages: C++, JavaScript, Python, OOP in C++

Libraries Frameworks: React, Redux, Node.js, Express.js, HTML, CSS, Tailwind CSS, REST APIs, Selenium, Flask

Tools and Platforms: GitHub, Docker, Firebase, VS Code, Postman, Figma, Unix/Linux, Google Cloud Platform

Other Skills: MongoDB, Image Text Preprocessing, Attention Mechanism, Model Deployment (NLP), BLEU/ROUGE Evaluation

Soft Skills: Communication, Teamwork, Leadership, Public Speaking, Technical Writing

CERTIFICATIONS & ACHIEVEMENTS

- Supervised Machine Learning: Regression and Classification – Coursera, Stanford University
- Advanced Learning Algorithms by Andrew Ng – Coursera
- NPTEL Elite Certificate in Cloud Computing
- Solved 300+ LeetCode problems and active on GeeksforGeeks platform
- District-Level Table Tennis Winner – Champion in Singles category