Tushar Bhatia

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Education

- **Guru Gobind Singh Indraprastha University** — Delhi, India
  Bachelor of Technology - Computer Science and Engineering; GPA: 9.16 — *Dec 2020 - July 2024*
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Software Engineering, Object Oriented Programming, Networking, Database Management System, Data Mining*

Skills Summary

- **Languages**: Python, Java, C++, JavaScript, TypeScript, SQL, HTML, CSS, Go, R
- **Frameworks**: ReactJS, Next.JS, Node.JS, Angular, Tailwind, RestAPI, Scikit-Learn, NLTK, TensorFlow, Django, Flask
- **Tools**: Docker, GIT, GitHub, GitLab PostgreSQL, MySQL, MongoDB, VS-Code
- **Platforms**: Linux, Web, Windows, AWS, Azure, IBM Watson Cloud
- **Soft Skills**: Leadership, Problem-Solving, Event Management, Writing, Teamwork, Public Speaking, Time Management

Experience

- **IIIT Delhi** — New Delhi
  Software Research Intern — *May 2023 - July 2023*
  - **Front end Development**: Developed and deployed interactive visualization widgets for flow cytometry data, enhancing data analysis capabilities.
  - **Back-end Development**: Collaborated with teammates to design and integrate APIs for seamless system integration, ensuring smooth interactions between different components.
  - **Authentication framework**: Implemented clean and efficient code to create a token-based web authentication framework for SaaS application.
  - **Tech Stack**: JavaScript, TypeScript, NextJS, ReactJS, TailwindCSS, ChakraUI, MongoDB, FastAPI, Docker.
- **Allsoft Solutions Pvt. Ltd.** — Remote
  Apprentice — *June 2022 - August 2022*
  - **Training**: Received comprehensive training in AI technologies, including Python, OpenCV, NLP, Reinforcement Learning, and Deep Learning.
  - **Project**: Worked on an industry-grade machine learning project, gaining hands-on experience in developing practical solutions.
  - **Tech Stack**: Python, Streamlit, Sklearn, Tensorflow.
- **The Sparks Foundation** — Remote
  Data Science and Analytics Intern — *Sept 2021 - Oct 2021*
  - **Task**: Developed machine learning and data analytics models to extract insights and make predictions based on real-world datasets.
  - **Tech Stack**: Python, Pandas, Numpy, Sklearn, Tensorflow.

Projects

- **DERM-ID: Dermatology Image Recognition and Diagnosis Tool**: GitHub
  - **About**: Developed an ML-based web application to help in the preliminary diagnosis of dermatological diseases by uploading images along with AI-powered chatbot support
  - **Tech Stack**: JavaScript, Python, Flask, Next.JS, TailwindCSS, LLM, OpenAI API
- **MI-MAP: Misclassification of Images by Masquerading Using Adversarial Patterns**: GitHub
  - **About**: ML-based research project developed to analyze and generate adversarial patterns to intentionally manipulate the classification and detection models to either misclassify or completely refuse to detect the subject at all by adding imperceptible changes to images.
  - **Tech Stack**: Python, Tensorflow, OpenCV
- **Auto SQL Query Generator**: GitHub
  - **About**: Built an end-to-end LLM application using Google Gemini Pro to generate SQL queries from text and retrieve queries from SQL database .
  - **Tech Stack**: Python, Streamlit, LLM, Google Gemini Pro, SQLite
- **CytoUI**: GitHub
  - **About**: Developed a SaaS-based web application for streamlining flow cytometry analysis and providing a seamless user experience. Serves as a centralized platform where users can upload their FCS files, perform data extraction and preprocessing, and visualize the results.
  - **Tech Stack**: JavaScript, react.JS, Next.Js, Python, FastAPI, TailwindCSS
- **Car Damage Detector**: GitHub
  - **About**: Implemented an ML model using TensorFlow and OpenCV to detect and classify car damage, applying deep learning techniques and algorithms for accurate identification and assessment.
  - **Tech Stack**: Python, Tensorflow, OpenCV

Publications

- **Paper**: **Dissecting Adversarial Attacks: A Comparative Analysis of Adversarial Perturbation Effects on Pre-Trained Deep Learning Models** Link
  Published by International Journal of Scientific Research in Engineering and Management (IJSREM) in December 2023
- **Paper**: **Deep Learning-Based Approach for Thyroid Dysfunction Prediction (Python, Deep Learning)** Link
  Published by International Research Journal of Engineering and Technology (IRJET) in April 2023

Position of Responsibility

- **Vice-Chairperson At GeeksForGeeks-Student Chapter** Delhi, India
  Managed a team of 8 members, and organized various technical events and hackathons. *Mar 2022 - Apr 2023*

Extra-Curricular

- Secured second place and the title of "most innovative coding project" at Sciencious Hackathon 2022.
- Participated in Flipkart Grid 4.0.