

Mitanshu Goel

Software Developer

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INTRODUCTION

Software Engineer with experience in building and deploying full-stack web applications. Proficient in developing scalable backends with Python/Express and creating responsive user interfaces with React. Skilled in the complete software development lifecycle, from requirements analysis and design to testing and deployment.

EDUCATION

B. Tech (ECE) at Maharaja Agrasen Institute of Technology, Delhi

November 2022 - Current

- Pursuing Electronics and Communication Engineering with minor in specialization in AI/ML.
- Active participation in tech, entrepreneurship, and cultural events as coordinator/participant

SKILLS

- **Programming Languages:** Python, JavaScript, C++, SQL
- **Frameworks & Libraries:** React, FastAPI, Express, Tailwind CSS, Pandas, NumPy, SciPy, Sentence Transformers
- **Databases:** MongoDB, PostgreSQL, MySQL, Firebase, ChromaDB
- **Tools :** Git, Docker

WORK EXPERIENCE

Nextup Robotics - Robotics Intern

July 2024 - September 2024

- Developed control algorithms in ROS to improve the robotic arm's speed and precision.
- Automated calibration of arm movements through software routines, achieving high accuracy and smooth motion.

SarthakAI - AI and Robotics Intern

June 2025 - August 2025

- Designed an automated sorting system integrating computer vision and robotics for efficient package handling.
- Built a sensor network using Raspberry Pi and ESP32 devices for data collection and analysis.
- Developed a voice-controlled AI assistant with NVIDIA NeMo to enable hands-free system commands.

PROJECTS

MEMORY VAULT ([GITHUB](#))

- Built a personal memory assistant app enabling users to save, search, and organize memories and notes.
- Engineered a full-stack solution featuring a FastAPI backend with AI-driven memory creation and ChromaDB vector search, paired with a React frontend for semantic retrieval and smooth organization.
- **Tech Stack:** FastAPI, Python, ChromaDB, Sentence Transformer React, JavaScript, HTML/CSS.

Stock Analysis Platform ([GITHUB](#)) ([LINK](#))

- Developed a web app to analyze correlations between user-provided data and historical stock prices
- Engineered a FastAPI backend to process user-uploaded CSV data, fetch corresponding stock data from Yahoo Finance, and perform in-depth correlation analysis (Pearson, Spearman, Kendall).
- **Tech Stack:** FastAPI, Python, Pandas, NumPy, SciPy, yfinance, React, JavaScript, HTML/CSS.

Chess Platform ([GITHUB](#)) ([LINK](#))

- Created a multiplayer chess platform featuring a Stockfish AI opponent.
- Used React for the frontend and Firebase/Express for real-time gameplay with move validation.
- **Tech Stack:** React, JavaScript, Firebase, Express, REST APIs HTML/CSS

POSITION OF RESPONSIBILITY

Core Member A.T.O.M (Robotics Society)

October 2023 - Present

Maharaja Agrasen Institute of Technology, Delhi, India

- Worked on robotics projects and represented the college in national and international competitions like Robocon and International Rover Design Challenge.
- Helped organize workshops, tech events, and project demonstrations on campus