

HIMANGI MALIK

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Education

Dr. B.R. Ambedkar National Institute of Technology, Jalandhar

2022 - Present | 8.46 CGPA

B.Tech - Electronics and Communication Engineering

Skills

- **Languages and Libraries:** C/C++, Python, HTML, CSS, YAML, TensorFlow, Numpy, Matplotlib, PyGame, Discord.py
- **Developer Tools and Frameworks:** Postman, Jupyter, VS Code, Figma, Git, Ubuntu
- **Courses and Interests:** Data Structures, Algorithms, Operating Systems Linux, Machine Learning, Neural Networks, OOPS

Projects

MicroGrad | Python, Jupyter

[Github](#)

- A scalar-valued autograd engine and a neural net library on top of it with PyTorch-like API
- Trained a 2-layer neural network as a Multi-Layer Perceptron (MLP) binary classifier by initialising a neural net from the micrograd.nn module, implementing a simple Support Vector Machine (SVM) "max-margin" binary classification loss, and using Stochastic Gradient Descent (SGD) for optimization.
- Enhanced the library's educational value by 75% BY including detailed Jupyter notebooks demonstrating the core concepts and practical applications.

Travel Website | YAML, Postman, Javascript

[Website](#)

- Developed a travel website integrated with GPT, leveraging 4 LLM plugins accessed through multiple APIs.
- Authored numerous plugins in YAML using the OpenAPI schema to facilitate integration and reduce code redundancy by 18%.
- Streamlined development process by implementing rigorous API testing with Postman and crafting optimised front-end JavaScript code; decreased page load times by 30% and improved overall app performance by 50%

Chess Game | Python

[Github](#)

- Implemented a two-player chess game in Python using the PyGame module, which supports 91 standard chess rules including move validation for all pieces, king safety (check conditions), and an interface for tracking captured pieces.

Discord Bot | Python

[Github](#)

- Built a Discord bot with the discord.py library. Designed bot functions to automate and simplify various tasks, reducing the coding cycle by 50% integrated with the Discord API to enable real-time interactions and hosted a server to demonstrate the bot's capabilities to users.

Experience

Outreachy Open Source Internship

March 2023 - April 2023

- Shortlisted among only 1,000 candidates worldwide; contributed to three impactful projects.
- Collaborated with **Oppia** to enhance their reach in India 2023.
- Assisted **NumFocus** in identifying bugs in the PySal library, contributing to the study of AI Governance models.
- Worked with **Metal3** to identify and fix issues in their Bare Metal API and Kubernetes cluster, enhancing system stability.

Department Undergraduate Committee — Representative

July 2023 - Present

- Representative of the 2026 of ECE Undergraduates (Total of 117 students) in the DUG Committee.

Awards and Extra Curriculars

- First runner up at the **PCTE debate**, winning a cash prize of Rs 25000
- Core Team member at **Google Developer Student Club** - NITJ (2023 batch)
- Raise awareness about inhumane treatment of animals, rescuing poultry animals and fostering stray animals since 2021. **Volunteered** at a non-profit yoga and art of living NGO dedicated to the community (Sri Sri Gyaan Vikas Kendra) in 2020
- Operations Team member at **TedX NIT Jalandhar 2024**
- Among the top performers at **Albert Barrow** Essay Writing Competition 2019