

# Arun Natarajan

B.Tech CSE NITC

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 [Arun Natarajan](#)  [ArunNats](#)  [arunnats2004](#)

## Education

National Insitute of Technology Calicut	St Josephs Academy	St Joseph's Academy
Computer Science and Engineering	98.4%	95%
8.06 CGPA	School and district topper	School topper
B.Tech	ISC - 12th Grade	ICSE -10th grade
2022-2026	2022	2020

## Experience

### CoreStack

SWE Summer Intern

#### May 2024 - Present

-Developed data generation programs based on the Azure CSP schema, encompassing over 50 correlated fields. These programs randomly generate data and calculate costs based on various input parameters to estimate user service billing.

-Built FastAPI servers to provide API endpoints that accept date ranges, billing details, and product codes, generating cost per product and total cost over the billing period. Hosted sample data on MongoDB, enabling server caching.

- FastAPI, Python, MongoDB

 <https://www.corestack.io/>


### Hardware Lab - CSED, NITC

Summer Intern

#### May 2023 - Present

-Wrote MIPS code and created extensive documentation to serve as study material for the Hardware Lab course at NITC. Worked on recursion and function parameter passing in MIPS assembly.

-Working on a python program which evaluates assignment submissions based on predefined testcases and automates grading MIPS assembly code and Verilog code.

 [Hardware Lab Documentation](#)

## Projects

### Movie Match

Website which aggregates and provides streaming information about all movies.


#### Winners of Bit'N'Build International Hackathon 2024 Kerala State

-Developed a Python script to collect and update data daily from multiple public internet sources, enhancing data availability and accuracy.

-Built a responsive website backend using JavaScript with Node.js and Express, using a fuzzy search engine with Fuse.js that sorts by multiple filters and movie ratings, improving user search experience.

-Integrated OpenAI API to provide personalized movie recommendations, offering tailored suggestions based on user preferences.

javascript, MongoDB, OpenAI, python, nodeJS, fuseJS, Web Development

 <https://github.com/arunnats/movie-match>

### FLIX

Machine Learning model to give movie recommendations

-Developed Flix, a web app for movie recommendations, using Vite and React for a responsive user interface styled with Tailwind CSS. Built a collaborative filtering AI model using Python trained on the MovieLens dataset, hosted on a FastAPI server, to provide personalized book suggestions.

-Stored movie data in a MySQL database, ensuring reliable data management. Data visualization was done through MathPlotLib and Seaborn.

MySQL, ReactJS, Vite, Tailwind, Python, Machine Learning, Data Science, Web Development

 <https://github.com/arunnats/Flix>

### Harvest Buddy


Built at Bit N Build International Hackathon finale

#### Team Project - Backend Lead

-Developed an inventory management system for farmers to track crop growth cycles, real-time weather updates, and inventory usage. Integrated Twilio for SMS notifications and OpenMapBox for farmer location data, providing crop growth, usage, and market suggestions using OpenAI language models.

-Managed inventory data with MongoDB and built the server with Node.js and Express, featuring a retro game-themed UI.

nodeJS, expressJS, Twilio, mongoDB, passportJS, OpenAI, OpenMapBox, Web Development

 <https://github.com/arunnats/HarvestBuddy>

### Minutes Maker

Web-app that generates minutes from uploaded audio

#### Solo project

-Developed a web app hosted on Google Cloud to automate meeting transcription and minute generation, integrating Deepgram Nova 2 for transcription and OpenAI GPT-3.5 for creating meeting minutes, with a user-friendly interface.

-Built the backend with Node.js, using Express.js, Axios for API interactions, and Multer for handling audio file uploads to Google Cloud.

OpenAI, Deepgram Nova, NodeJS, ExpressJS, Axios, Multer, Javascript, Web Development

 <https://github.com/arunnats/minutes-maker>

## Skills

JavaScript	Python	C	C++	MySQL
MongoDB	NodeJs	ReactJs	FastAPI	Machine Learning
Data Science & Visualization	Content Writing	Digital Design & Video Editing	Marketing & PR	Talent Acquisition

## Student Involvement

Computer Science and Engineering Association	FOSSCELL NITC	Literary and Debating Club
Excecutive	Design Head	Writer, Designer and Tech Team
-Hosted and taught a Verilog 101 introductory lecture to familiarize freshman students with the basics of their hardware courses.	-Volunteered at the Linux installation drive	-Designed and wrote articles published on the website and Instagram page and participated in debates and speeches
-Organized and managed department events and designed merchandise.	-Volunteered to teach at " Git and Github basics" workshop	-Managed and hosted talk shows, open debates and cultural and literary programs
	-Participated in the organizing and design committee of FOSSMEET	