

# Arun Natarajan

B.Tech CSE NITC

Calicut, India +91 9080068577 arunnats2004@gmail.com https://www.arunnats.com/

Arun Natarajan ArunNats arunnats2004

## Education

<b>National Insitute of Technology Calicut</b> Computer Science and Engineering 8.06/10.00 CGPA B.Tech 2022-2026	<b>St Josephs Academy</b> 98.4% School and district topper ISC - 12th Grade 2022	<b>St Joseph's Academy</b> 95% School topper ICSE -10th grade 2020
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## 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.
- Implemented FastAPI servers to create API endpoints handling date ranges, billing details, and product codes, resulting in randomized sample billing calculations; hosted sample data on MongoDB, enabling efficient server caching.

FastAPI, Python, MongoDB

https://www.corestack.io/

### Hardware Lab - CSED, NITC

Summer Intern

May 2024 - June 2024

- Wrote MIPS code and created extensive study material for the Hardware Lab course at NITC; focused on recursion and function parameter passing, resulting in a more comprehensive and extensive documentation.

Hardware Lab Documentation

## Projects

### FLiX - Solo project

Fullstack web app with a machine learning model to give movie recommendations.

- Developed a web app using Vite and ReactJS styled with Tailwind CSS for the frontend along with a NodeJS server as the backend.
- Built a collaborative filtering AI model using Python trained on the MovieLens dataset hosted on a FastAPI server to provide personalized movie suggestions.
- Stored movie data in a MySQL database with data visualization done with MathPlotLib and Seaborn.

MySQL, ReactJS, Vite, Tailwind, Python, Machine Learning, MathPlotLib, Seaborn, FastAPI, , Fullstack

https://github.com/arunnats/Flix

### Movie Match - Backend Lead

Web app aggregating streaming information about all movies.

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

- Created a Python script to collect and update data daily from multiple APIs to populate a MongoDB database containing over 300,000 movies.
- Built a responsive website backend using JavaScript, Node.js and Express, using a Fuse.js fuzzy search engine, improving user search experience.
- Integrated OpenAI's GPT 4 to provide personalized movie recommendations.

MongoDB, OpenAI, nodeJS, fuseJS, Javascript, Python

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

### YouTube Video Conveter - Solo project

Web Application to Convert and Download YouTube Videos.

- Created a YouTube video converter which convert video links into MP3/MP4/Webm formats encoded by FFmpeg.
- Built a Node.js server running Express sessions to efficiently manage concurrent requests.

JavaScript, FFMPEG, ExpressJS, NodeJS, Bootstrap

http://yt-converter.arunnats.com/

### Minutes Maker - Solo project

Web-app that generates minutes from uploaded audio files.

- Developed a web app to automate meeting conclusions by integrating Deepgram Nova 2 for transcription and OpenAI GPT-3.5 for creating meeting minutes.
- Built the backend server with Node.js, Express.js, Axios and utilized Multer for handling audio file uploads.

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

https://minutesmaker.arunnats.com/

## Student Involvement

<b>Computer Science &amp; Engineering Association</b> Excecutive  -Hosted a Verilog 101 introductory lecture to familiarize freshman students with the basics of their hardware courses.  -Organized and managed department events and designed merchandise.	<b>FOSSCELL NITC</b> Design Head  -Participated in the Linux installation drive.  -Volunteered to teach at " Git and Github basics" workshop.  -Participated in the organizing, runtime and design committees of FOSSMeet 2024.	<b>Literary and Debating Club</b> Writer, Designer and Tech Team  -Designed and wrote articles published on the website and Instagram page and participated in debates and speeches.  -Managed and hosted talk shows, open debates and cultural and literary programs.
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## Skills

JavaScript	Python	C	C++	MySQL
MongoDB	NodeJs	ReactJs	FastAPI	Scikit-Learn
Seaborn	Selenium	MathPlotLib	Digital Design & Video Editing	Content Writing