Arun Natarajan

B.Tech CSE NITC

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Arun Natarajan · ArunNats · arunnats2004

Education

National Insititute of Technology Calicut	St Josephs Academy	St Joseph's Academy
Computer Science and Engineering	98.4%	95%
3.22 / 4.00 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 - July 2024

- 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

Book Mate - Solo Project

- Built a matchmaking and recommendation site utilizing Node.js and FastAPI for backend APIs, ReactJS with GSAP for frontend animations, MySQL for storing user data, and OAuth2 for authentication.
- Users receive book recommendations based on selected books, can save favorites to their library, and get matched with others based on similar book profiles.

MySQL, ExpressJS, ReactJS, NodeJS, FastAPI, Python, Javascript, Machine Learning, Fullstack, OAuth2

https://bookmate.arunnats.com/

FLiX - Solo project

- Fullstack Web App with Machine Learning for Movie Recommendations developed with Vite, ReactJS, Tailwind CSS (frontend), and Node.js (backend).
- Implemented collaborative filtering AI using Python, trained on the MovieLens dataset (162k users, 25M ratings), hosted on a FastAPI server and stored movie data in MySQL; used Matplotlib and Seaborn for data visualization.

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

https://flix.arunnats.com/

Movie Match - Backend Lead

- Winners of Bit'N'Build International Hackathon 2024 Kerala State
- Developed a web app that aggregates streaming data for 300,000+ movies through a Python script and multiple APIs, updating a MongoDB database daily.
- Built a responsive backend using JavaScript, Node.js, and Express. Integrated OpenAI's GPT-4 to offer 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 into requested formats with the output encoded with FFmpeg, running on NodeJs.

JavaScript, FFMPEG, ExpressJS, NodeJS, Bootstrap

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

Student Involvement

Computer Science & Engineering Association	FOSSCELL NITC	Literary and Debating Club	Tathva 2023 Design Committee
Excecutive	Design Head	Writer, Designer and Tech Team	Executive Designer
Hosted a Verilog 101 introductory lecture to familiarize freshman students with the basics of their hardware courses.	Volunteered in the "Linux installation drive" and the "Git and GitHub Basics" workshop.	Designed and wrote articles for the website and Instagram page. Participated in debates and speeches.	Created brochures for expo committees.
Organized and managed department events and designed merchandise.	Participated in the organizing, runtime, and design committees of FOSSMeet 2024.	Managed and hosted talk shows, open debates, and cultural and literary programs. Created applets and contributed to club websites.	Designed posters for the various events for Tathva 2023.
	Designed posters for multiple events.		

Skills

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