Sindhura Rajiv Jain

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EDUCATION

National University of Singapore Aug 2022 - May 2026

Bachelor of Computing (Honours) in Computer Science, 2nd Major in Mathematics

Technical Skills: Python, JavaScript, TypeScript, Java, Rust, C++, C, Swift, HTML/CSS, R

Frameworks & Technologies: ReactJS, GraphQL, TailwindCSS, PyTorch, Keras, Tensorflow, BeautifulSoup, MATLAB, ExpressJS, NodeJS, MongoDB, Spring Boot, REST API, Angular, MySQL, VIM, Linux/Unix

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Computer Organisation, Calculus, Discrete Mathematics, Linear Algebra, Probability & Statistics

Distinctions: NUS Merit Scholarship for academic excellence, Honors College

WORK EXPERIENCE

Machine Learning Research Intern (Full-Time) May 2023 - Jul 2023

Agency for Science, Technology and Research

- Used PyTorch to explore the use of generative models such as GANs and Variational Autoencoders for query synthesis-based active learning approaches for analog circuit design regression application

Research Assistant (Part-Time) Jan 2023 - Apr 2023

National University of Singapore

- Wrote Python scripts using Epitran library for grapheme-to-phoneme conversion of poetry written in various languages for "Universals in Language Iconicity" linguistics research project
- Built web scraper in Python using BeautifulSoup to create corpus of Thai poetry

Teaching Assistant (Part-Time) Jan 2023 - Apr 2023

School of Computing, National University of Singapore

- Conducted 2 weekly tutorial sessions of 30 students each for Digital Ethics & Data Privacy computing course
- Led discussions on case studies, reinforced content and graded assignments

Software Engineering Intern (Part-Time) Sept 2022 - Jan 2023

SpooQy Lab, Centre for Quantum Technologies

- Developed a machine learning model in Python using TensorFlow to classify images of clouds by cloud cover
- Improved model accuracy from 40% to 90% by reducing overfitting
- Integrated it into a website using Streamlit to predict the classes of images that a user uploads

PROJECTS

Stock Price Time Series Forecasting Model | *PyTorch, Python, Pandas*

https://github.com/sindhurajain/stock-price-pred-lstm

- Developed Long Short-Term Memory (LSTM) neural network in Python for time-series forecasting of stock prices with an R^2 score of 0.97 (1.0 being a perfect prediction), indicating good performance

Algorithmic Trading Bot | *Python, Numpy*

https://github.com/sindhurajain/algo-trading-bot

- Developed algorithmic trading bot in Python by implementing breakout trading strategy with dynamically changing lookback period based on volatility and trailing stop loss to cut losses and let profits run
- Earned simulated profit of $40,929.45 in a 3-year time frame using toy cash of $100,000

Personal Website | *ReactJS, HTML5, CSS3, MaterialUI*

https://sindhurajain.github.io/portfolio/ | https://github.com/sindhurajain/portfolio

- Developed personal website React application to showcase projects and skills, deployed on GitHub Pages

Full-Stack Blog Website | *MongoDB, ExpressJS, ReactJS, NodeJS (MERN Stack)*

https://github.com/sindhurajain/MERN-stack-blog

- Developed features of authentication, creating blog posts, editing one's own post, and displaying all posts using ExpressJS/NodeJS connected to MongoDB database for backend and ReactJS for frontend

ACTIVITIES

- Head of NUSClimatech (green technology interest group)
- Editor for Yale-NUS Undergraduate Research Journal