

NIHAR SANDA

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EDUCATION

Northeastern University - Khoury College of Computer Sciences

2023 - 2025 (Expected)

MS in Computer Science

Boston, MA, USA

Indian Institute of Information Technology, Dharwad

2019 - 2023

Bachelor of Technology, Computer Science and Engineering

Karnataka, India

TECHNICAL SKILLS

Languages: Python, R, Java, HTML, CSS, C++, C, JavaScript, Typescript, OWL, RDF

Libraries: Numpy, PyTorch Matplotlib, Seaborn, Scikit, Pandas, Keras, TensorFlow, Dlib, SciPy

Web Technologies: Bootstrap, Node, React, RESTful services, AJAX, PHP, Flask, Django, Docker, Jenkins, CI/CD, R Shiny

Database: SQLite, PostgreSQL, MySQL, MS SQ, MongoDB, NoSQL, DynamoDB, Redis.

PROFESSIONAL EXPERIENCE

Indian Institute of Technology, Bombay

May 2023 – Present

Research Associate

Mumbai, India

- Scaling the "Affect Aware Tutoring System Using Video Bots" to learn student engagement with adaptive feedback, improving accessibility and enhancing learning outcomes.
- Demonstrating leadership and project management skills by overseeing the development of a high-performance learning management system, designed to handle concurrent usage by over 10,000 users.
- Engaged in extensive research on "Privacy Protection of Student Video Data in Diverse Learning Environments" exploring innovative approaches to safeguard student privacy and confidentiality within various educational settings.

Patenti Technology Solutions

January 2023 - May 2023

Software Engineering Intern

Bengaluru, India

- LookupTM Tool:** Creating a comprehensive IP infringement search tool by utilizing OCR models and employing Django's Model-View-Template (MVT) architecture to develop the web application with MySQL database.
- Devops Operations:** Deployment and Maintenance of multiple production and testing environments on AWS EC2, S3, and Redis, utilizing Github Actions for CI/CD automation.
- Backend Development:** Developed many backend modules and executed a pipeline with LLMs for topic modeling and scientific term retrieval in patent documents, incorporating APIs and implementing RateLimiting for seamless integration.

Camplus App, Varopro Private Limited

February 2021 - January 2023

Founder and CEO

Mumbai, India

- Leadership:** Led a team of more than 10 people in the development of a campus management application catering to a user base exceeding 800 individuals, receiving grants and funding of more than \$13000.
- Incubation:** The startup, was incubated by New Gen IEDC IIIT Allahabad, Government of India, under the Startup India initiative, secured funding and garnered significant media attention.
- Backend Development:** Engineered the application's multi-tenant backend leveraging a robust tech stack including AWS Lambda, DynamoDB, S3, SES, API Gateway, and the MEN (MongoDB, Express, Node) stack.

PROJECTS

Covid-19 Mortality Prediction | Data Visualization, Machine Learning, Deep Learning

May 2022

- Data analysis and processing:** Proficient in cleaning, exploring, and transforming private hospital data with 1 lakh data points to better understand and extract information using Pandas and Python
- Data Imbalance Mitigation:** Employed techniques such as SMOTE and undersampling to effectively tackle the challenge of imbalanced data.
- Mortality Prediction:** Implemented state-of-the-art machine learning models to predict COVID-19 patient mortality, utilizing an ensemble approach and achieving an impressive accuracy of 93%

PEcAn Project API Package Creation and Forecasting Dashboards | R, APIs, Backend, Shiny

November 2022

- Engineering the APIs for the various PEcAn packages of data assimilation and meta-analysis in the R language, contributing to its creation and enhancement.
- Enhanced the authentication of the existing REST APIs by incorporating robust API Key authentication and implementing efficient rate-limiting features.
- Leveraging R Shiny to create a robust and user-friendly dashboard, empowering users to generate dynamic SDA (State Data Assimilation) and forecasting graphs for various researchers around the world.

ACHIEVEMENTS AND LEADERSHIP

- Lead a team to the Grand Finals at Smart India Hackathon 2022 and also won many National Level hackathons
- 2 times Google Summer of Code (2022, 2023) Recipient PEcAn Project
- Open Source Contributor for Rucio(CERN), CircuitVerse, PEcAn Project with many accepted PRs.
- Founder and President at Velocity, Web Development Club of IIIT Dharwad • Captain of the University Tennis Team.

RESEARCH PAPERS AND PUBLICATIONS

- Interestingness from COVID-19 Data: Ontology and Transformer-Based Methods** - ICON 2022, proceedings in ACL Anthology (SCI and SCOPUS Indexed)
- Ontology-Based Semantic Data Interestingness Using BERT Models** - Taylor and Francis' Connection Science Journal (SCI and SCOPUS Indexed)