Sreeram Raghammudi

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WORK EXPERIENCE

Nurish   **Jun. 2024 – Sep. 2024**
Research and backend development Intern   *Wyckoff, New Jersey*

- Part of the Research and Development team at Nurish, a meal logging startup.
- Prototyped OpenAI-based meal serving size and water logging pipelines using Python and implemented them in production with NodeJS.
- Optimized OpenAI pipelines, improving accuracy by 20% and output speed by 400% through parallel processing and user data analysis.
- Integrated RAG (Retrieval-Augmented Generation) to fetch user-specific food data.

Wipro Limited   **Jun. 2023 – Aug. 2023**
Project Intern   *Hyderabad, India*

- Part of Rapid Prototype Gen AI Team at Enterprise Applications.
- Tested, reviewed and implemented capabilities of Vertex AI "PaLM 2 for text" and "Codey for code completion" for multiple applications.
- Contributed to the development of "Agent Assist," an application designed to enhance the workflow of technical support. Increased support work-flow time efficiency by 80%.

Faista Fashion   **Sep. 2023 – Mar. 2024**
Co-Founder   *Dubai, UAE*

- Identified a market gap for personalized fashion.
- Developed an accessible, interactive platform for custom fashion design
- Built a React web application with ThreeJS, enabling dynamic 3D rendering of customizable shirts to allow users to design unique clothing styles via an intuitive interface
- Established a reliable supply chain by securing partnerships with over 10 tailors across Dubai and Ajman; successfully showcased the platform in the "New Venture Creation" course at all BITS-Pilani campuses.

Physics Laboratory, Birla Institute of Technology and Science, Pilani   **Sep. 2022 – Jan. 2023**
Professional Teaching Assistant   *Dubai, UAE*

- Responsible for teaching and guiding three out of ten experiments as part of the "Physics Laboratory" course designed for first-year students, enrolled in the Bachelor of Engineering program.

EDUCATION

Birla Institute of Technology and Science, Pilani   **2021-Present**
B.E Computer Science   *Dubai, UAE*

- Expected Graduation year: 2025
- CGPA: 8.7
- President at Entrepreneurship-cell of BITS-Pilani, Dubai
- Start-up Coordinator at Institution's Innovation Council (Indian Ministry of Education Initiative)

SKILLS

- Python: Tensorflow, Flask, Sqlite3, Pandas, Numpy, Seaborn, Stats-model, Matplotlib, NetworkX, NetGraph, OpenAI API, Streamlit.
- Java, C/C++
- HTML, CSS, Bootstrap CSS, Tailwind CSS, JavaScript, NodeJS, ReactJS.

ACCOLADES

- **Publications**:
  - Prediction of Multi indices across Pandemic and Geopolitical Crisis: An Application of Deep learning tools (Accepted, First Author) at **World Finance Conference-Abu Dhabi**
  - Modeling Crisis-Induced Spillovers in Global Financial Markets Using Machine Learning (Elsevier: Journal of Open Innovation: Technology, Market, and Complexity; Under review, Second Author)
  - Sarcasm Detection using Deep Learning (Springer: Natural Language & Linguistic Theory: Under Review, Second Author)
- **Patents**
  - System to produce salts of aliphatic and aromatic amino acids from agricultural waste. (link)
  - A method to prepare chelated amino acids from garlic waste (link)
- 16th IEEE UAE Student's Day Winner in Computing and Robotics 2022
  - Project - Robotics for Road Safety
  - Designed and proposed an autonomous, multi-hub drone system to assist in road safety measures.
- 13th National Level Student Research Seminar Winner (2024)
  - Dynamics of Oil, Automotive, Energy and Technology: Market Connectedness using VAR.
- MAHASAT – University's in-house Pico Satellite launch program
  - Co designed external module for the pico-satellite.

RESEARCH EXPERIENCE

- **Multi model Sentiment Analysis using Deep Learning**　　　　　　　　**Feb. 2024 – Present**
  - Extended previously published research on sarcasm detection by incorporating multimodal data, including video, audio, and contextual text inputs. Utilized Long Short-Term Memory (LSTM) neural networks for binary classification, achieving a best F1 score of 0.808. Received grade A.
- **Diabetic retinopathy segmentation and classification**　　　　　　　　**Aug 2024 – Present**
  - Performed feature segmentation on blood vessels and exudates in retinal images to identify key indicators for Diabetic Retinopathy (DR) analysis.
  - Developed a multiclass classification CNN model to assess the severity of DR on segmented images, enabling more accurate categorization of disease stages.
- **Closing price prediction using Hybrid Deep Learning Models**　　　　　　**Dec. 2023 – present**
  - Demonstrated forecasting of gold closing prices using hybrid deep learning models, including LSTM-CNN, and implemented Keras-Tuner for optimized hyperparameter tuning. Applied Vector Auto Regression (VAR) for effective feature selection and time series modeling.
- **Weather forecasting using Machine Learning Models**　　　　　　　　**Aug. 2023 – Mar. 2024**
  - Utilized Ridge Regression and Long Short-Term Memory (LSTM) models to forecast hourly precipitation and temperature data for the city of Chennai. Feature variables included humidity, cloud cover, atmospheric pressure, and time-based factors (e.g., year, month).
  - Developed a functional application that uses an API to fetch 50 days of feature parameters for accurate target variable prediction. Received grade A
- **Gas Sensing using nano materials**　　　　　　　　　　　　　　**Feb. 2023 – Jun. 2023**
  - Researched on gas sensing technologies utilizing nanomaterials, specifically arsenene and phosphorene, to enhance detection capabilities. Received grade A
- **Sustainable research for reusing kitchen and agricultural waste**　　　**Apr. 2018 – Aug 2020**
  - Idea conception and data analytics for converting garlic waste and agricultural waste to useful amino acids and salts under acidic medium and controlled heat.

VOLUNTEERING

- **Salesperson at Thrift for Good, UAE**
  - Donated clothes are sold at highly affordable prices to the needy; all proceeds support Gulf for Good's children's charity projects, sanctioned by Islamic Affairs Fundraising.
  - Raised over 900 AED in a single day
  - Collectively raised over 4000 AED in a single day
- **Beach Cleanup** at Al-Mamzar Beach.