Hemanth Bysani

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Education

- **Amrita School of Engineering** — Bangalore, India
  Computer Science and Engineering; ***CGPA: 9.03*** — *Aug 2020 - Aug 2024*

  Leadership Experience: ***FACE Vice President, GeeksForGeeks Chapter Lead***

- **Narayana CO Kaveri Bhavan** — Bangalore, India
  State Board 12th: 85.3%, JEE Mains ***96%*** — *Aug 2018 - March 2020*

Skills Summary

- **Languages:** (Proficient) Python, Java, C/C++. (Familiar) Javascript, SQL
- **Tools:** SpringBoot, Maven, Marklogic, Tensorflow, Keras, OpenCV, Pandas, MongoDB, Node.js, JIRA, MySQL, Postman, Selenium

Experience

- **GE Aerospace** — Bangalore, India
  Data Science DT Intern — *Jan 2024 - Current*
  - Working on optimizing Crack Detection in GE turbojet engines using bore scope images and videos.
- **Northern Trust** — Bangalore, India
  SDE Project Intern — *June 2023 - September 2023*
  - Assigned to Full Stack project, Involved in developing deployment ready software to solve complex issues using Java SpringBoot, Maven, Marklogic database, Bamboo, Azure pipelines. Project will Go-Live by Q4 2023 on company servers
- **Wipro** — Bangalore, India
  ML Project Intern — *July 2022 - August 2022*
  - Created a structured framework to improve the feature selection process by creating reusable modules, automating testing, implementing performance monitoring to identify bottlenecks, creating real-time graphs, designing the system to allow for easy monitoring and iteration of individual components within the context of the pipeline.

Projects

- **Research on Pneumonia Detection using chest X-ray based on ensemble learners (Published Paper)**
  - Researched on the efficiency of using ensemble learners with deep learning models using transfer learning on the detection of pneumonia in chest X-ray images.
  - This research was published to and accepted by ICCCNT14 international conference held at IIT-Delhi, India on July 2023.
  - Used tensorFlow library and PyTorch Library for model creation with pre-trained weights and applying transfer learning using a stacked ensemble method.
  - Achieved accuracy of more than 89.5% on validation data of 1500 images with a high AUC score of 98.4% .
- **Research on Sustainable Development Goals(SDG) Based Forecast Model for India's Economic Growth**
  - Evaluated sustainable development of economic growth based on data treated by SPSA-FSR.
  - Utilized the SPSA-FSR model for dimension reduction of economy-growth indicators in India.
  - Employed Elastic Net and other regression models to establish the wrapper model for SPSA-FSR.
  - Achieved 90+% accuracies in our model evaluations and found out that 9 parameters can be possibly reduced using our method, resulting in savings upwards of 10,000 crores Indian Rupees.
- **Extractive Text Summarization of Doctor-Patient notes (IIA Hackathon Winner)**
  - Implemented 4 machine learning models for extractive text summarization of doctor-patient notes, with an accuracy of more than 90%.
  - Conducted data preprocessing on a dataset of 10,000 sentences, including tokenization, lemmatization, and weighted frequency formulation, and performed comparative analysis on the models.
  - Utilized NERs to categorize words based on their meaning and roots and applied weighted frequencies by leveraging a healthcare dictionary provided to us.
  - Models included: Bert, Sumy, Cosine-similarity, SpaCy

Notable Achievements

- **Published Machine Learning themed paper in healthcare domain to (ICCCNT14) on July 2023.**
- **Ranked among top 3% in my class based on Curriculum and Extra Curriculum activities.**
- **Ranked 12th position in Inctf competition, wtfctf 4th position, Tamil CTF 9th position, NITECTF 15th position.**
- **Sainya Ranakshetram finalist, TrollCAT CTF 5th position FY 2020-2022**
- **Finished runner up in TCS Techbytes regional tech competition with cash prize as reward**
- **Innovation Incubators Hackathon: awarded a cash prize and recieved internship opportunities.**