

HARSHA VARDHAN REDDY BONTHU

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📍 Blacksburg, VA

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🕒 Harsha1997

WORK EXPERIENCE

Software Engineer

Fidelity Investments

📅 Aug 2019 – June 2021

📍 Bangalore, India

- Implemented a **proactive recommendation system** to improve over 2 million customer's financial portfolio. [Spark, Scala]
- Designed and developed **Event-Driven Architecture APIs** to provide real-time recommendations thereby reducing the latency from a day to under a minute. [Java, AWS, SpringBoot]
- Developed an application that uses **Random Forest Classifier** to predict if a customer has concentrated his savings into one bucket and achieved over **80% accuracy** for **30 million customers**.
- Built a **chatbot** using Fidelity's cognitive intelligence platform based on **Amazon LEX** for production support and information retrieval.
- Automated testing using a highly complex JSON comparison and parsing tool that reduced the testing hours by **60%**.

Software Engineering Intern

Fidelity Investments

📅 May 2018 – July 2018

📍 Bangalore, India

- Developed a **full-stack API** that serves as an error notification dashboard to alert the associates for specific log errors. [NodeJS]
- Scraped out the information from **Splunk** logs, used **Oracle DB** to store data for future use, and sent personalized emails in case of an escalated situation. [SQL]

ACADEMIC PROJECTS

IDENTIFYING HATE SPEECH IN SOCIAL MEDIA

- Explored **Jigsaw Unintended Bias in Toxicity Classification** dataset for our purpose. Used SMOTE and undersampling techniques for rectifying class imbalance.
- Achieved a F1-Score of **0.913** using LSTM with Glove Twitter embeddings on a vectorized input space of 10,000 features.

EMOTION RECOGNITION IN SPEECH

- Extracted features from audio files of Emo-DB dataset using *Mel frequency cepstral coefficients* (MFCC).
- Achieved a F-1 score of **82.3%** using *Convolutional Neural Networks* to detect the four emotion states (anger, happy, sad, and neutral) in the processed audio files. [Python, CNN, LSTM, SVM, RFC, MLP]

FACEPLAY - GENDER, FACE AND EMOTION DETECTION

- Obtained a bounding box over facial regions using *Haar Cascade classifier* in OpenCV. Identified facial landmarks using DLIB Library and trained *FisherFace Recognizer* on images from KDEF and IMDB-WIKI datasets.
- Implemented Gender and Emotion detection on images obtained live via a feed from a webcam.

EDUCATION

Virginia Tech

Master's in Computer Science

📅 Dec 2022

📍 Blacksburg, VA

GPA: 4.0/4.0

Relevant courses: Data Analytics, Machine Learning with Big Data

Motilal Nehru National Institute of Technology, Allahabad

Bachelor of Technology, Computer Science

📅 May 2019

📍 Allahabad, India

GPA: 8.0/10

Relevant courses: Data Structures, Algorithms, Operating Systems, Database Management Systems

TECHNICAL SKILLS

- Languages:** Java, C, C++, Python, Scala, SQL, NodeJS
- Tools:** Jupyter Notebooks, Eclipse, IntelliJ, AGILE, Jenkins, JIRA, Docker, IBM Udeploy, Git
- Technologies:** Spring Boot, Apache Spark, Apache Maven, REST APIs, Micro-services, AWS (DDB, ECS, SQS, SNS, S3, Lambda)

AWARDS AND ACTIVITIES

- Received **EIA (Excellence in Achievement)** award at Fidelity for leading the Event-driven API project
- Secured a rank of **1953** at **JEE Mains** among 1.3 million participating students.
- Served as a **Training and Placement Representative** at MNNIT Allahabad, 2018-2019.
- Led a team of 200 students as **Festival Secretary** of the Cultural Fest of MNNIT with a budget of over **3 million INR**.