Vamshi Bussa

404-281-8428 | vab58@pitt.edu | github.com/vamshibussa | linkedin.com/in/vamshibussa | www.pitt.edu/~vab58

EDUCATION

University of Pittsburgh   Pittsburgh, PA
MS in Computer and Information Sciences (Start Fall: 2019) GPA: 3.75/4.0   Expected **April 2021**
Graduate Student Research Assistant under Prof. Heidi Donovan, Dr. Nicolas Farnan
Courses: Algorithms Design, Data Mining & Visualization, Explainable AI, Advanced DB's, Adaptive Informative Systems, System design, HCI.

Mahindra Ecole Centrale (MEC)
BTech in Computer Sciences and Engineering   Hyderabad
Graduated in First class. Dean's List for academic excellence in 2 semesters.   May 2018
Awards: Received Dean's Students' Scholarship for 2 years. Activities: Founded Robotics club 'Innovative Androids', 'Travel Club'.
Courses: Theory of computation, Cloud, Computer Architecture, Computer Networks, Operating Systems, Economics, Finance, Design Thinking

TECHNICAL SKILLS

- Programming Languages – C, C++, C#, Python, Java, JavaScript (node.js, Angular and React), MERN, Matlab, Swift, Go, Scala, Flutter.
- Frameworks & Tools – Spark, Dart, R, Tableau, TensorFlow, Keras, CUDA, Pytorch, AWS, Springboot, Hive, Docker, Kubernetes.
- Others – Postgres SQL, Hadoop – MapReduce, Linux/Unix, GIT, Neo4j, Jenkins, Azure, GCP, Cassandra, Redis, RabbitMQ, Kafka.

PROFESSIONAL EXPERIENCE

Philips USA – Advanced Innovations Team   Pittsburgh, PA
Software Development Intern   May 2020 – Dec 2020
- Worked on multiple distributed, multi-tiered systems: building iOS sdk's, Android & compatible WearOS watch apps using Swift, Kotlin, Java & Spring with direct relation to data science/analysis of patients to address challenges on Health care industry.
- Involved extensively and worked closely with team architects, senior engineers to develop a group of well-connected monolith micro services connecting backend, machine learning pipelines to stream tranches of data from user's end and other end points.
- Independently wrote multiple API functions in node.js, python routing data from wearable devices to cloud based backend including Firebase, GCP and AWS. Involved in brain storming sessions with UX/UI team to learn design philosophies.
- Developed patient-physician website & payment gateway for a portal used by many Philips client-based hospitals across USA.
- Worked closely with R&D team on multiple patentable devices to improve millions of people lives by solving sleep issues using advanced technology & AI/ ML, where I was a co-author of a filed invention disclosure (ID- 2020ID01002, **Patent pending**).

Tech Mahindra   Bangalore
Jr Data Scientist/Developer   Jul 2018 – Jul 2019
- Worked on projects applying Data science and Machine learning techniques to address challenges on client side (Verizon, Logitech, Oracle) and across other internal teams within the company by regularly gathering requirements from stakeholders.
- Pioneered exploratory data analysis using SQL and Python and created visuals that revealed 3-4 years of empirical outcomes towards implemented policies. Built end to end machine learning pipelines using Python, Scala and Kafka. Optimized models by adding additional features, utilizing advanced models such as feed forward neural nets, xgboost, lightgbm to achieve more than 85% accuracy. Used LSTM RNN to improve demand forecasting over existing time series techniques.
- Took responsibility and led project meetings with clients, leadership team and partners within the organization to define scope and ensure project's checkpoint, resulting in on-time deliverables while balancing the budget, client needs and final products.

Tata Consultancy Services   Hyderabad
Software Development Intern (Emerging talent programme)   May 2017 – Jul 2017
- Developed rich and interactive web platforms using MEAN stack for internal applications. Developed, deployed a chatbot for the client (KPMG) using Docker, minikube gives live data from the stock markets used by stockbrokers for efficient trading.

Deepredink   Hyderabad
Software Development Intern   May 2016 – Jul 2016
- Developed two dynamic web-based applications where one gives sentimental analysis of twitter data based on a particular hashtag using NLP and the other tool converts audio/video data into text, which are used by the marketing teams for survey.

SELECTED ACADEMIC PROJECTS

INDOOR POSITONING SYSTEM   Aug 2019 – May 2020
Research Project, UPitt (Advisor: Prof. Jacob Biehl)
- Developed an application relying on a novel algorithm to locate a network of wide variety devices (phones, tags, beacons) used to wirelessly locate objects or people inside a building. Used numerous computational methods using different Deep Neural Networks, using linear programming optimization techniques reduced error i.e., in distance measurement from mt's to few cm's.

GRAMMAR BASED COMPRESSION   Jan 2017 – May 2018
Semester Research Project, MEC (Advisor: Prof. Bruhadeshwar Bezawada)
- Developed an algorithm to search subsequence string in a given complex sequence of data. Used various computation methods with Context Free Grammars (CFG) for pattern matching and we were able to compress the string simultaneously while searching. Algorithm is a C++ implementation of LCA, it takes a text as input and builds a straight-line program consisting of restricted production rules in a context free grammar. Our implementation uses a variable-length dictionary for memory-efficiency. Moreover, it is possible to extract substrings from the compressed text without decompressing it and to compute the suffix as a byproduct