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: 3.8/4.0 April 2021
Graduate Student Research Assistant under Prof. Heidi Donovan & Dr. Nicolas Farnan
Courses: Algorithms Design, Data Mining & Visualization, Advanced Databases, Adaptive Informative Systems, Interactive 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', 'Crypto 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), MATLAB, Swift, Go, Scala, Spark, Rust.
- Frameworks & Tools – R, Tableau, TensorFlow, Pandas, Pytorch, Redis, Cassandra, Neo4j, **Solidity, Vyper, Web3, Ethereum.**
- Others – SQL, Hadoop – MapReduce, Linux/Unix, GIT, Docker, Jenkins, Kubernetes, Springboot, AWS, RabbitMQ, Kafka, Android.

PROFESSIONAL EXPERIENCE

Philips USA – Advanced Innovations Team Pittsburgh, PA
Software Development Intern May 2020 – Dec 2020

- Worked on multiple **distributed, multi-tiered systems** projects: building android apps & compatible WearOS watch apps using Kotlin, Java & Spring with direct application to data science, analysis of patients to address challenges on Health care industry.
- Involved extensively, worked closely with architects, senior engineers in network design & developed a group of well-connected micro services connecting backend, machine learning pipelines to stream tranches of data from user's end and other end points.
- Independently wrote API functions in node.js, python which routes data from wearable devices to cloud based backend GCP & AWS. Involved in brain storming sessions with UX team to learn **design philosophies & implementation experience.**
- Developed patient-physician payment gateway for a portal used by many Philips client-based hospitals across USA.
- Worked with R&D team on multiple patentable devices to improve millions of people lives by solving sleep issues using sensor technology, AI/ML (CNN & DNN) where I was 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 85% accuracy. Implemented & deployed Nginx – HTTP load balancer with AWS. Used LSTM RNN to improve demand forecasting over existing time series techniques. Took responsibility, led project meetings with clients, leadership team & partners within the organization to define scope, ensure project's checkpoint resulting in on-time deliverables while balancing **budget, client needs and customer satisfaction**.

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.

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, sensors, VR) 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 each 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, our implementation uses a variable-length dictionary for memory-efficiency.

Vallahacoin - Token Pittsburgh
Blockchain Developer Apr 2021 – May 2021

- Developed a token – vallahacoin which can handle contracts on Ethereum network, allowing transactions using solidity and launched it on Binance for fun. Locked the liquidity pool at 95% to gain the trust of people. It Reached to a peak value of 250,000$ market cap during crypto bull run.