ANUSHA PRAKASH

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EDUCATION

Syracuse University - New York **September 2021 – May 2023**
Master's in Computer Science **Cumulative GPA: x.xx/4.00**

- **Honors & Awards:** "Excellent Research Scholar"
- **Relevant Coursework:** Advanced Computer Architecture, Functional Programming in Haskell, Social Media Mining and Sentiment Analysis on Twitter data.

Visvesvaraya Technological University – Bengaluru, India **September 2014 – May 2018**
Bachelor of Engineering in Computer Science **Cumulative GPA: 3.47/4.00**

- **Honors & Awards:** 1st place for "Best innovative startup idea"
- **Relevant Coursework:** Data Structures and Algorithms, Computer Architecture, Unix OS, Artificial Intelligence

PROFESSIONAL EXPERIENCE

Cohere-Med Technologies Pvt. Ltd. **Bengaluru, India**
Data Scientist – Research & Development *June 2018 – August 2021*

- Worked on various projects and case studies that predominantly focused on predictive analytics and modeling in critical healthcare
- Developed predictive models using machine learning and deep learning in various categories of patient decompensation and validated them on retrospective and prospective data acquired from client sites
- Contributed to the successful development, integration, deployment, and continual management of the projects at client sites
- Presented case studies to clinicians from various backgrounds and interacted with them to understand the problem statement and their requirements better
- Patent: "System and method for detecting and predicting occurrence of cardiac events from electrocardiograms."
  - Status: Under review
  - Application Numbers: 16/327766 and 16/829978 filed in January 2020
  - Designed and developed modules for automatic peak detection of one-dimensional ECG signals

PROFESSIONAL PROJECTS, CASE STUDIES, PUBLICATIONS

- **Early Identification of Cardiac Decompensation and Cardiogenic Shock** *September 2020 – June 2021*
  - Successfully validated Duke Institute for Health Innovation's Cardiac Decompensation model on different patient phenotypes
  - Developed REST APIs and deployed docker containers to integrate the model into the application
- **Predicting Early Patient Decompensation in an ICU using psychological parameters** *August 2020 - August 2021*
- **Predicting the onset of Sepsis in an Emergency Department** *March 2019 – June 2021*
  - Validated Duke Institute for Health Innovation's Sepsis model on various patient phenotypes on retrospective and prospective data acquired from multiple sources
  - Developed REST APIs and deployed docker containers to integrate the model into the application
- **Covid-19 Risk Stratification among individuals using K-Means and K-Modes** *April 2020 – August 2020*
- **Case Studies on predictive models to compute mortality risk in an ICU** *December 2018 – December 2020*
  - Developed a multi-task model using deep learning algorithms to predict ICU patient mortality using patient phenotypes based on their comorbidities as multi-tasks
  - Developed models using Long Short-Term Memory (LSTM) in order to predict ICU patient mortality in the first 24-48 hrs
- **Case Studies on Arrythmia and ECG (Echocardiogram)** *April 2019 – June 2019*
  - Developed modules and REST APIs for signal processing, noise removal and automatic peak detection on raw ECG signals
  - Developed models using Recurrent Neural Network (RNN), 1D Convolutional Neural Networks (CNN), and Long Short-Term Memory (LSTM) to classify 1D ECG signals into one of four major categories of Arrythmia
- **Regression models to predict horizon trends in patient's physiological parameters** *October 2018*
  - Developed regression models to using linear and polynomial regression algorithms to predict trends in heart rates, temperature and pulse oximeter
- **Corresponding author of the paper "Using Machine Learning assess Covid-19 Risks"**
- **Author of published IJERT paper "High speed internet using opto-electronic microprocessors"**

TECHNICAL SKILLS

- **Operating Systems**: Mac OS, Linux, Raspbian OS
- **Programming Languages**: C, Python, C++(basic), Java (basic), SQL, Hive Query Language
- **Markup Languages**: HTML, CSS, XML
- **Python Data Science & Visualization Libraries**: Scikit-Learn, Numpy, Scipy, Pandas, TensorFlow, Keras, OpenCV, BioSPPy, Natural Language Toolkit (NLTK) Python Data Science, Matplotlib, Seaborn
- **Developer Tools:** Google Cloud Platform (Big Query)
- **AWS:** S3 Storages, Amazon RDS, Amazon Deep Learning AMIs Git, Visual Studio, Spyder IDE
- **Software:** Docker Containers, Apache Hive, Apache Hadoop, MATLAB (basic)
- **Databases:** MySQL, PostgreSQL, Fast Healthcare Interoperability Resources (basic)
- **Web Services:** REST APIs
- **Analytic Tools:** Tableau, Apache Superset