Shanmukh Swaroop Srinivas

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Education

- **University of Massachusetts Amherst** — Amherst, MA
  Master of Science in Computer Science ***(Eligible for Summer 2021 CPT)*** — *Joining in Spring '21*
- **Indian Institute of Technology Madras** — Chennai, India
  Bachelor of Technology in Chemical Engineering; GPA: 8.65/10.0 — *Aug. '16 – July. '20*

Experience

- **JP Morgan Chase & Co.** — Bengaluru, India
  Software Engineer Intern — *Summer '19*
  - **Work Visualization**: Worked with the Tech team of **Corporate and Investment Banking** to develop a **React.js** based web application that visualizes work progress of employees.
  - **Bank balance prediction**: Built a supervised machine learning model with **99.73%** prediction accuracy, earning award from higher management as a part of JP Morgan Chase's **Global Hackathon**.
- **Real Tycoon** — Chennai, India
  Software Developer Intern — *Summer '18*
  - **Data Analysis**: Analyzed real estate data from a city and devised an algorithm to find the best location with minimal living costs, sought facilities and the best value for money.
  - **Full Stack Web Development**: Single-handedly developed a dynamic and modern website for a digital marketing agency, by incorporating **Javascript, jQuery, PHP, and MySQL**.

Freelance Projects

- **Cryptocurrency Trading Algorithm**
  - Successfully developed a Cryptocurrency Trading Algorithm using Sentiment Analysis of relevant Articles using **Natural Language Processing** and Swap Funding Rate data.
  - The algorithm was able to generate upto **1700%** profit during backtesting over an year's price data of Bitcoin and Ethereum.
- **REST API Integration:** Developed and integrated REST APIs for an at-home services provider mobile application.

Research Experience

- **Weighted Graph Partitioning Algorithm for Optimal Sensor Placement**
  Guide: Dr. Sridharakumar Narasimhan, IIT Madras — *February '19 - September '19*
  - Worked on an efficient partitioning algorithm by weighing the edges of a power system network which is conceptualized as a graph with the electrical lines as edges and buses as nodes.
  - The proposed modification will ensure that a line of higher impedance is preferred over a line of lower impedance, to be in the cutset.
- **Algorithm to obtain Maximal cut on a polygon with dead zones**
  Guide: Dr. Sridharakumar Narasimhan, IIT Madras — *September '19 - May '20*
  - Worked on an optimization algorithm to maximally cut a polygon with dead zones into circles of user-defined sizes.
  - The proposed algorithm was dimensionally robust enough to be able to solve volume and length problems.

Conferences Attended

- **IPSE 2019 - IIT Madras**: Presented a poster on Weighted Graph Partitioning Algorithm at Indian Process Systems Engineering Conference (IPSE), Chennai, India

Awards and Recognition

- **Sangam ML Hackathon - Runners-up**: Built spacio-temporal models to predict and visualize pollution levels in major cities with data collected from dedicated sensors.
- **KVPY Scholar**: Secured an All India Rank of **113** and a recipient of KVPY fellowship offered by IISc, Bangalore.

Programming Skills

- **Languages**: Fluent in C++ and Python;
- **Technologies**: Git, MATLAB, GNU Octave, LaTeX
- **Web Development** : HTML, CSS, Javascript, PHP, MySQL, AJAX
- **Libraries** : Scikit-learn, NumPy, TextBlob, NLTK, Pandas