SUDARSAN BALAJI MANIKANDAN

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EDUCATION

Master of Computer Science   *Graduating May 2021*

Arizona State University • Tempe, Arizona   CGPA: 4/4

Relevant Coursework: Data Structure and Algorithms, Statistical Machine Learning, Data Processing at Scale, Human Computer Interaction, Data Mining, Data Visualization

Bachelor of Technology in Computer Science and Engineering   *Aug 2015-May 2019*

National Institute of Technology, Tiruchirappalli • Tiruchirappalli, India   CGPA: 7.57/10.00

Minor in Management

Relevant Coursework: Data Communication and Networking, Algorithms, Computer Architecture, Compiler Design, Cryptography, DBMS, Operating Systems

TECHNICAL SKILLS

Programming: Python, C, C++, Java, HTML, Git, SQL, PHP, Scala, JavaScript

Data Analysis and Statistics: R, Apache Spark, Jupyter Notebook, MATLAB

Applications and Tools: Android App Development, IntelliJ IDEA, Wireframing Tool - Axure RP

PROJECTS AND INTERNSHIPS

Deep Reinforcement Learning applied on Extractive Summarization   *Tiruchirappalli, India*

Guide: Dr. E. Sivasankar   *Period: November 2018-May 2019*

- Used a DQN consisting of a hierarchical CNN-RNN structure to reduce redundancy and increase salience.
- Developed a real-time Android application that uses the GOOGLE VISION API to capture text from an image and generate the summary on-the-go. Used PICKLE package to run the models on lightweight devices.

Rare Sound Event Detection   *UIUC, Illinois*

Guide: Dr. Deming Chen   *Period: May 2018-July 2018*

- Used state of the art networks (1D CNNs and RNN-LSTM) to recognize some sounds of interest for security surveillance purposes. Experimented different ensemble methods that can be used to increase the accuracy.
- Datasets provided by DCASE(Detection and Classification of Acoustic Scenes and Events) competition were used to train and calculate the accuracy, further compared with other models.

Summer Internship at SellerGro   *Chennai, India*

Role: Development Intern   *Period: May 2017-July 2017*

- Probed different machine learning algorithms to optimize forecasting reports and carried out a comparative analysis of state of the art algorithms. Created reports on the Product database using SQL and PHP.
- Developed a program to scrape web pages to return required information as an excel file.

Pizza Hut Delivery Tracker   *Tempe, Arizona*

Guide: Dr. Robert Atkinson   *Period: September 2019-December 2019*

- In collaboration with the Pizza Hut UX team, improved the post-order experience of the Pizza Hut app with the help of maps and live location.
- Conducted thorough competitor analysis, requirement and usability studies. Achieved a higher satisfaction rating.

Develop and Run Spatial Queries on Geo-databases   *Tempe, Arizona*

Guide: Mr. Jia Yu   *Period: September 2019-December 2019*

- Extract data from a peer-to-peer taxi cab firm's extensive database that contains geographic data as well as real-time location data of customers, using Apache Spark and SparkSQL.
- Developed and performed spatial hot spot analysis which includes hot zone analysis and hot cell analysis.

ACADEMIC ACHIEVEMENTS AND EXTRA-CURRICULAR ACTIVITIES

- Awarded **Scholarship from the Ministry of External Affairs (Govt. of India)** for academic performance in the Higher secondary examination conducted by the Board.
- Head of **Media Relations Team** of the National Level Inter-Collegiate Cultural Festival of NIT-Trichy (2016-2019). Associated with HBO, WB, Netflix, etc. Handled media aspects and led a team of 50 members.