SRINIVAS RAHUL SAPIREDDY

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EDUCATION

Advanced Diploma, Artificial Intelligence   National Institute of Electronics and Information Technology, Calicut, India   **88/100 (Jan'20)**
Relevant Modules:

Machine Learning and Deep Learning	AI Platforms and Reinforcement Learning
Natural Language Processing	Introduction to AI and Programming Tools – R and Python

Master of Science, Computer Science   University of Illinois at Springfield, USA   **3.92/4 (Dec'18)**
Relevant Courses:

Programming Languages	Database Design	GPU Computing	Introduction to Parallel Programming
Data Visualization	Object Oriented Programming	Digital Image Processing	Graduate Research Seminar

Master of Science, Electrical Engineering   University of Missouri Kansas City, USA   **3.51/4 (Dec'16)**
Relevant Courses:

Analog IC Design	Mixed Signal Circuit Design	Introduction to VLSI Design	Nanoscale Manufacturing
Nanoscale Devices & Circuits	Solar Cell PV	Network Architecture	Intro to Wireless Communications

*Graduate Student Researcher at **Nano IC Group** – Topic: Content Addressable Memory Future and Applications*

Bachelor of Technology, Electronics and Communication Engineering   JNTU Hyderabad, India   **75.42/100 (May'14)**
First Class with Distinction

TECHNICAL SKILLS

- **Languages** : Java, R, Python, C, MATLAB for Image Processing, Open CV (Basics)
- **Machine Learning** : Supervised and Unsupervised Learning, Classification and Regression, Linear Regression, KNN, K Means, Logistic Regression, SVM, Decision Tree, Naïve Bayes, Ensemble Methods, Random Forest, Boosting and Optimization
  - **Libraries** : numpy, matplotlib, pandas
- **Deep Learning** : ANN, CNN, LSTM, SOM
  - **Frameworks** : Tensorflow, Keras
- **NLP** : Text processing, Lexical processing, Syntax and Semantics, Text Analytics (TextBlob)
- **Reinforcement Learning** : Thompson Sampling, Upper Confidence Bound, Q- Learning
- **Data Science** : SQL, NoSQL, SSIS, SQL Server 2016, Tableau
- **IDE's** : Eclipse, NetBeans, Spyder, Jupyter, CodeBlocks
- **Operating Systems** : Linux, Windows

PUBLICATIONS

[J3] Bhavya Teja Gurijala, Srinivas Rahul Sapireddy, "Automation of Patient Medical Record Dispatch System Software Application", International Journal of Advanced Research in Science, Engineering and Technology. vol. 5, issue 6, pp. 6074-6097, June 2018.

[J2] Srinivas Rahul Sapireddy, "CAM Cell Based Memory Architecture for Extreme Searching Operations". International Journal of Advances in Electronics & Computer Science. vol. 3, issue 8, pp. 80-83, Aug 2016.

[J1] S. Srinivas Rahul, P. Naga Tejaswi, Y. Mohan Sandeep, K. Hari Krishna "Two Stage Operational Amplifier with a Gain Boosted, Source Follower Buffer". International Journal of Engineering Trends & Technology. vol. 34, no. 6, pp. 256-259, April 2016.

CONFERENCES

[C1] Srinivas Rahul Sapireddy "CAM Cell Based Memory Architecture for Extreme Searching Operations". International Conference on Recent Innovations in Electrical, Electronics, Computer, Information, Communication and Mechanical Engineering" (ICRIEECICME 2016)

AWARDS

Recipient of Dean's International Scholar Award, University of Missouri Kansas City, 2015

STUDENT EMPLOYMENT

Union Food Studio at University of Illinois at Springfield   **Sep' 18 – Dec' 18**
Role: Student Assistant

Information Support Services at University of Missouri Kansas City   **May' 16 – Dec' 16**
Role: Student Assistant Technical Level II
Responsibilities:

- Monitored the security of the labs and the equipment. Provided a clean environment for students.
- Answered questions for the students using the labs. Performed basic troubleshooting of the lab computers and computer software.

- Redirected phone inquiries to the call center of the campus information center. Communicated with supervisors and co-workers, technical staff to help them maintain lab equipment. Performed special projects for the lab supervisors as requested.

EXTRACURRICULAR ACTIVITIES

Student Organization Funding Association of Student Government Association at University of Illinois at Springfield   **Sep'18 – Dec'18**
Role: Chair
Responsibilities:
- Volunteered as Chair for Student Organization Funding Association (SOFA) which is a standing committee of the student government association.
- As a guiding body for student organizations under the SGA, this committee looks to allocate university funds to student organizations in a fair, unbiased, and efficient way, to promote student interaction and a positive learning environment on campus.
Contributions:
- Attended weekly meetings reviewing student funds available. Contributed to discussions on processing budget accordingly in an academic year.

Indian Student Association at University of Missouri Kansas City   **Jan'15 – Dec'16**
Role: Member

INDEPENDENT COURSEWORK (ONLINE)
Fundamentals of Programming offered by Coursera and University of Toronto
Statistical Learning offered by Stanford Online Learning
C Programming for Embedded Applications, LinkedIn

PROJECTS
Machine Learning
- **ML Problem: Classification of malware in API Call Sequences**
  Algorithms: Logistic Regression, SVM, Naïve Bayes, Decision Tree, Random Forest, Ada Boosting, Grading Boosting, ANN
  Technologies: sklearn
  Data Source: Kaggle

- **ML Problem: Class prediction and user classification to check whether the users bought the recommended service or not**
  Algorithms: K-Nearest Neighbor, Logistic Regression, Naïve Bayes, Decision Tree, Random Forest, SVM
  Technologies: sklearn
  Data: Iris, Ecoli, Social_Network_Ads
  References: superdatascience.com

- **ML Problem: Clustering using KNN**
  Algorithm: K-Means
  Data: xclara.txt (Artificial data set consisting of 3000 points in 3 well-separated clusters of size 1000 each)
  Technologies: sklearn

- **ML Problem: 3 Dimensional and Spherical K-Means Clustering**
  Algorithm: K-Means
  Dataset: Sample Dataset
  Technologies: sklearn, mplot3d, Spherical Clustering

- **ML Problem: Boston Home Price Prediction and Evaluation**
  Algorithm: Linear Regression, KNN Regressor, Decision Tree Regressor
  Data: Boston_Housing.csv
  Technologies: sklearn

- **Data Exploration and Analysis – Customer Churn Rate Prediction**
  Tools: Tableau, R and Python
  Data: Churn_Modelling.csv
  Algorithm: Random Forest Classifier, Logistic Regression
  Guides: https://www.tableau.com/learn/articles/data-visualization

- **ML Problem: Movie Recommendation System with Market Basket Analysis (Association Rule Learning)**
  Algorithm: Apriori, Elcat
  Tools: Python, R
  Dataset: Market_Basket_Optimization.csv (Source: kaggle)

- **Open CV: Image Manipulation, Transformation, Rotation, Blending, Edge Detection, Thresholding and Face Detection**
  Tools: Python

- **NLP Problem: Text Summarization, Classification, Sentiment Analysis, Document Similarity Check (Cosine Similarity Method)**
  Tools: Python

- **NLP Problem: Documents Clustering**
  Algorithm: K Means
  Tools: Python

  OpenCV:
- Real-Time Face Recognition: An End-to-End Project (Recognizing faces in both images and video streams)
- Automatic Vision Object Tracking

- **Reinforcement Learning**
  Implemented Multi-Armed Bandit Problem using **Upper Confidence Bound**. [Python, R]
  Optimized Ads CTR with Reinforcement Learning by **Thompson Sampling**. [Python, R]
  Designed reinforcement learning system using Open AI Gym with Q-learning techniques [Python]
- Reinforcement Learning Environment using Hybrid Intelligence System
  Algorithms: CNN, RNN, Variational Autoencoder
  Tools: Python
  Environment: Open AI Gym
  Reference: https://worldmodels.github.io/

- **Dimensionality Reduction and Model Selection:**
  Dimensionality reduction using **PCA, Kernel PCA, and LDA**. [Python, R]

- **Deep Learning:**
  Trained **Feed Forward Neural Network** on Iris dataset using **Keras**. [Python]
  Image classifier for identifying cat's vs dogs using **Convolutional Neural Network**. [Python]
  Implemented **Long Short-Term Memory Recurrent Neural Networks** using Deep Learning techniques. [Python]
  Bit coin value prediction using **Recurrent Neural Network**. [Python]
  Trained MNIST data on **Generative Adversarial Networks**. [Python]

Data Science

- Created statistical models using Backward Elimination, Forward Selection, and Bidirectional Elimination methods. [Python]
- Built a robust geodemographic segmentation model to find the likelihood of the customers to leave or stay with the bank using **Logistic Regression**. [Gretl]
- Applied Cumulative Accuracy Profile (CAP) to access models and derive insights from the CAP curve. [Excel]
- Created stored procedures in SQL. [Microsoft SQL Server Management Studio]
- Used SQL Server Integration Services to upload data into a database, created conditional splits in SSIS and dealt with text qualifier errors in RAW data. [SSDT-BI]