Rochan Avlur Venkat

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EDUCATION

- **Mahindra Ecole Centrale** — Hyderabad, India
  Bachelor of Engineering in Computer Science; GPA: 3.65 (9.13/10.0) — Aug. 2017 – May, 2018

- **AECS Maaruti Magnolia Pre University College** — Bangalore, India
  High School; GPA: 3.20 (8.0/10.0) — Jun. 2015 – March. 2017

- **Delhi Public School - East** — Bangalore, India
  High School; GPA: 3.9 (9.8/10.0) — Jun. 2015

SCHOLASTIC ACHIEVEMENTS

- **Computer Science Department, Freshman Year** — Hyderabad, India
  Top 10 in a class of 60 students — May 2018

- **SAT Test score** — Bangalore, India
  SAT: 1350/1600; Subject SAT: 2320/2400 (Physics: 770, Math: 800, Chemistry: 750) — Nov 2016

RELEVANT COURSES

- **Sophomore**:
  - Data Structures - *Sorting & Searching Algorithms, Hashing, Trees, Graphs*
  - Discrete Mathematics - *Sets, Functions and Relations, Counting, Advance Counting Techniques, Graphs*
  - Mathematics - *Probability, Random Processes & Statistics*

- **Freshman**:
  - Computer Fundamentals & Programming - *C & Python Programming Language*
  - Mathematics - *Linear Algebra, Calculus*

EXPERIENCE

- **Mahindra Ecole Centrale** — Hyderabad, India
  Freshman — Aug. 2017 - May, 2018
  - **sptm - Individual**: Developed and published a python package on PYPI called sptm (Sentence Prediction using Topic Modeling), Experimented and tested various Topic Modeling algorithms (LDA, LSA, NMF & TFIDF) and other vector models such as lda2vec, doc2vec and word2vec, Worked under Anupam Mediratta as a summer intern
    * *Language: Python*
    * *Libraries: sklearn, gensim, MALLET, lda2vec, tensorflow, spacy, nltk, Numpy, matplotlib*
  - **CineLog - Team(2)**: Developing an Intelligent and Adaptive Framework to enable Multiplexes predict opening day sales of a movie & optimize schedule to maximize profits both real-time and in near-future; designed and developed LSTM Networks, Sentiment Analysis and core RNN
    * *Language: Python, golang*
    * *Libraries: Tensorflow, Pandas, Numpy, matplotlib, sklearn, lstmpredictor, imdbpie, googleapiclient, request, python-twitter*
  - **Harmonize - Team(3)**: Developed a Proof of Concept of a decentralized blockchain based Music Publishing & Sharing Platform; designed and developed core blockchain and back-end services
    * *Language: golang*
    * *Libraries: aws-sdk-go, websocket*
  - **oWatcher - Individual**: Developed a Discord bot to display detailed in-game performance statistics of a players in Overwatch by Blizzard Entertainment
    * *Language: NodeJS*
    * *Libraries: discord.io, winston, OWAPI*

- **AECS Maaruti Magnolia Pre University College** — Bangalore, India
  High School Student — *Jun. 2015 - March. 2017*
  - ○ **Research in Video Compression Algorithms - Team(2)**: Worked alongside Prof. Chandrashekar Vaidhyanathan, Contributions included to algorithm design, implementation and testing; Involved a lossless compression scheme that can be extended to both Near-Lossless and Lossy compression
    - ∗ *Language: C, R, Python*
    - ∗ *Libraries: ffmpeg, Libtiff, bnlearn, gRain*

- **Delhi Public School - East** — Bangalore, India
  Middle School Student — *Jun. 2013 - March. 2015*
  - ○ **A Sensor Based System to effectively track Geriatric Care and Dementia patients**: Was responsible in developing the full stack solution, including micro-controller programming, Android application development and back-end services
    - ∗ *Languages: Python, Java, Processing, MySQL*
    - ∗ *Libraries: NA*

Awards & Achievements

- **2018 - Pragyan Hackathon, Bangalore, India - *Special Mention***: Showcased an Adaptive Movie Scheduling Framework for Multiplexes using RNN's, LSTM, Sentiment Analysis and Machine Learning
- **2017 - Brave Hackathon, Hyderabad, India - *First Place***: Showcased a Decentralized Music Publishing and Sharing Platform built over 24 Hours
- **2017 - Intel International Science and Engineering Fair (ISEF), Los Angeles, United States - *Finalist***: Showcased a research project titled - A Lossless Video Compression Technique Using Baysian Networks and Entropy Coding
- **2017 - Intel Initiative for Research and Innovation in Science (IRIS), Pune, India - *Grand Award Winner, Finalist***: Showcased a research project titled - A Lossless Video Compression Technique Using Baysian Networks and Entropy Coding
- **2015 - Intel Initiative for Research and Innovation in Science (IRIS), Bangalore, India - *Finalist***: Showcased a research project on am Efficient Thermoeletric Refrigeration System
- **2014 - Open European Championship FIRST Lego League, Mannheim, Germany - *Most Innovative Solution***: Showcased a research project on the Utilization of T2 Bacteriophages to fight Food Contamination
- **2013 - FIRST Lego League (FLL), Regionals, Bangalore, India - *Best Robot Design***: Showcased a robot design that was highly efficient while still remaining simplistic
- **2012 - Intel Initiative for Research and Innovation in Science (IRIS), Chandigarh, India - *Finalist***: Showcased a solar cooker design that was inspired from the Parabolic and Box type designs

Programming Skills

- **Languages**: Python, C, R, C++, Golang, Javascript

- **Libraries**: libtiff, ffmpeg, ImageMagik, gensim, MALLET, TensorFlow, sklearn, Numpy, Pandas, Matplotlib2

- **Platforms**: AWS, GCP, Linux(x86, x86_64), Raspberry Pi, ARM Cortex-A53, Arduino, Android

Positions of Responsibility

- **Vice President** — Hyderabad, India
  Enigma, The Computer Science Club at Mahindra Ecole Centrale — *May 2018*

- **Student Member** — Intl.
  ACM & IEEE Student Member — *Since 2018*

- **Member** — Intl.
  Sigma Xi Member — *Since 2017*

- **Organizing Committee Member** — Hyderabad, India
  Centrale Connect Conclave — *2018*