

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

- **Core Courses:**
 - [Ongoing] **Sophomore** - Theory of Computation, Design and Analysis of Algorithms, Digital Logic & Design of Computer Architecture
 - **Sophomore** - Discrete Mathematics, Data Structures
 - **Fresher** - C & Python Programming Language
- **Mathematics:**
 - [Ongoing] **Sophomore** - Numerical Methods
 - **Sophomore** - Probability, Random Processes & Statistics
 - **Freshers** - Linear Algebra, Calculus

EXPERIENCE

- **Mahindra Ecole Centrale** Hyderabad, India
Sophomore *Dec. 2018 - Current*
 - [Ongoing] **Deep Reinforcement Learning & Transfer Learning Research - Individual under guidance:** Conducting research on interpretability and transferability Deep Reinforcement Learning, specifically targeting transfer learning problems under the guidance of Prof. Achal Agarwal
- **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, lstm predictor, 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 - Pragyana 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 Bayesian 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 Bayesian Networks and Entropy Coding
- **2015 - Intel Initiative for Research and Innovation in Science (IRIS), Bangalore, India - *Finalist*:** Showcased a research project on an Efficient Thermoelectric 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

TECHNICAL SKILLS

- **Languages:** Python, C, R, C++, Golang
- **Libraries & Frameworks:** libtiff, ffmpeg, ImageMagik, gensim, MALLET, OpenAI Gym, Pytorch, TensorFlow, sklearn
- **Platforms:** AWS, GCP, Linux(x86, x86_64), Raspberry Pi, Arduino

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

CONFERENCES, SEMINARS & WORKSHOPS

- **International Conference on Machine Learning and Data Science** Hyderabad, India
Attended two day conference held at Mahindra Ecole Centrale Dec 2018
- **MECHacks Hackathon** Hyderabad, India
Organized a 36 hour Hackathon as a part of Aether, the annual fest at Mahindra Ecole Centrale November 2018
- **Generative Art Workshop** Hyderabad, India
Conducted an introductory session on Generative Art as a part of the Computer Sci. Club November 2018
- **Photo-Realistic Rendering Workshop** Hyderabad, India
Conducted a session on Photo-Realistic Rendering as a part of the Computer Sci. Club November 2018
- **Mozilla Hackathon** Hyderabad, India
Organized a 36 hour Hackathon October 2018
- **Python Workshop** Hyderabad, India
Conducted a Python Workshop for fresher (First Year) as part of the Computer Sci. Club September 2018

EXTRA-CURRICULAR ACTIVITIES

- **Football** Hyderabad, India
 - **2019 - Current:** Member of the Mahindra Ecole Centrale College Football A Team, represent the college at Inter-College Meets
- **Swimming** Bangalore & Hyderabad, India
 - **2017 - Current:** Member of the Mahindra Ecole Centrale College Swimming Team, represent the college at Inter-College Meets
 - **2015:** Participated in the FINIS State level Sub Junior/Junior Championship event – Freestyle, Butterfly & Individual Medley events
 - **2012-15:** Represented Delhi Public School Bangalore East School Swim Team in a number of inter-school swimming competitions. Secured additional credits in CBSE Board
- **Running** Bangalore, India
 - **2015:** 1st Place in the 5 km ‘Spirit of Wipro’ marathon run (Open non-employee category); Timing: 21 mins
- **Music** Bangalore, India
 - **2005-10:** Learnt playing Tabla (Indian percussion instrument). Cleared the Aadhya, Madya, Purna, 1st year and 2nd year exams conducted by ‘Bangiya Sangeet Parishad’, Rabindra Bharati University, Kolkata