# Saurav Vara Prasad Channuri

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## Education

- **Indian Institute of Technology, Hyderabad** Telangana, India.
  *B.Tech. Engineering Sciences and B.Tech in Electrical Engineering* *2016 - present*
  - CGPA : 7.83/10 (upto $5^{th}$ semester in Electrical Engineering as a second Major)
  - CGPA : 7.20/10 (upto $5^{th}$ semester in Engineering Sciences)

## Projects

- **Bayesian Optimization based search for gravitational waves from compactbinary coalescences**
  *Under Dr. Srijith P.K and Dr Shantanu Desai, Assistant Professors at IIT Hyderabad*
  - Replacing the Particle Swarm Optimization techniques with other Bayesian approaches (like Monte - Carlo Markov Chain and other bayesian approaches ) for better accuracy and reduction of computational complexity for very huge Datasets(Gravitational wave data for celestial objects) in real time.
  - This is an ongoing project
- **Improving Visual Qualities of images generated by GANs**
  *under Sumohana Channappaya, associate professor at IIT Hyderabad*
  - improving the visual qualities of Generative adversarial Network(GAN) generated images using multi-scale structural similarity index
  - this is an ongoing project
- **Applying Multi layer Neural Network for making voice controlled bot**
  *under GVV Sharma*
  - applied neural network for voice recognition that trains to an individuals voice and goes forward, backward, left, right and stops based on the user's command
  - implemented this on Rasp-pi

## Relevant Course Work

- Applied Machine Learning (ongoing)
- Bayesian Data Analysis (ongoing)
- Data Mining (ongoing)
- Introduction to AI and ML
- Representation Learning
- Data Structures
- Algorithms
- CS229 by Andrew NG (online)
- Operating Systems
- Computer Architecture
- Principles of programming Languages
- Data Analytics
- Probability
- Statistics
- Discrete Structures
- Computer Networks
- Theory of Computation (online)
- Complex Variables
- Database Management
- Internet of Things

## Areas of Interest

- Machine Learning
- Deep Learning
- Statistical Modeling
- Bayesian Data Analysis
- Data Structures and Algorithms

## Technical Skills

- **Development:** Python, C , C++, FORTRAN, Eiffel
- **Data Science:** Numpy, Scipy, Matlab and Simulink, OpenCV
- **Operating Systems:** Linux(ubuntu), Windows
- **Databases:** MySQL
- **Misc:** Github, Arduino, MS office, Visual Studio.
- Basic knowledge of Java

## Additional Projects

- **'Line following Drone using Rasp pi 3' as**
  *a problem statement given by 'HoneyWell Laboratories' as a part of Inter IIT Tech Meet*
  - Made a stable drone that follows the yellow coloured line and scans the Barcode, QR code and Hazardous symbols on each crate along the line in the warehouse.
- **'Career Counsellor Chat-bot' as**
  *a problem statement given by IBM as a part of MEGATHON, a hackathon by IIT-Hyd and IIIT-Hyd*
  - Generated the test cases and the dataset required to train the chat-bot and managed the SQL Database at the backend.
  - Helped in integrating this SQL Database with the PHP interface with JSON .
  - Attained fourth position in our problem statement.
- **Project on re-engineering 'Disney - VertiGo' a wall climbling bot**
  *Done as Independent Project in association with Robotics Club - IIT Hyderabad in my first year of BTech*
  - Practically implemented the $12^{th}$ class physics of force analysis and implemented our IoT knowledge in coordinating with the sensors

## External Coursework

- **Completed the Course CS229 on Machine Learning by Andrew N G**
  *This was a course offered by Stanford University (officialy Uncredited)*
  - This was done as my own personal Interest
  - The practical problems were done as a part of another academic course
- **Completed the Course of Machine Learning in Coursera by Andrew N G**
  *officially Uncredited Course done as personal interest*
  - This was done for easier understanding of course CS229
  - The practical implementation of the algorithms taught were applied as a part of another course
- **Audited a Course on Compilers**
  *This was done as my personal interest*
  - This course is an institute offered course which is officially uncredited for me
- **Did a Course on Theory of Computation online**
  *Officialy Uncredited*
  - This was done to better understand the working of compilers

## Positions of Responsibility

- **Coordinator of Robotics Club IIT-Hyderabad** 2018 - Present
- **Core Member of Robotics Club IIT-Hyderabad** 2017 - 2018
- **Participated in 6th Inter IIT Tech Meet** Jan 2018
  *For problem statement of Warehouse challenge by "Honeywell Laboratories"*
- **Participated in 7th Inter IIT Tech Meet** Dec 2018

## References

1. Prof. Srijith P.K
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2. Prof. Shantanu Desai
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