GANESH RAM KESARLA SHANTHARAM **(MS in MS&E at Stanford SE)**
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Indian Institute of Technology Roorkee

EDUCATION

2011 - 2015 B-Tech, Pulp and Paper Technology (CGPA **8.48/10**)
Relevant Coursework (GPA 9.6/10)
Computer Systems & Programming, Electrical Science, Fundamentals of Electronics, Mathematics-1, Mathematics-2, Numerical Methods, Optimization Techniques, Engineering Computation, Process Automation, Physics-1, Physics-2

WORK EXPERIENCE

October 2017 - Present | Freelancer
Built the complete IoT and Web stack for DigiB that broadcasted location based ads in tourist buses; Currently working with BeatRoute, a logistics startup to develop a demand predictor (DNN) for better inventory management of local grocery stores.

May 2017 - September 2017 | Software Engineer, CloudxLab
As a Full Stack Developer, built applications in Django, Angular & Bootstrap; Built a code evaluation application that involved a browser based terminal & SSH Client, and a cloud based REPL environment.

September 2016 - April 2016 | Founder & CEO, Entrochef
Entrochef is an online marketplace for on demand home cooked meals. The model was similar to Uber and Airbnb but in the food space. Based on the user's location, home cooked meals in the vicinity could be viewed and ordered.

May 2015 - September 2016 | Software Engineer, AUTONINJA
Caused a ~10% increase in the revenue per client by identifying and building a solution that prevented parallel logins; As a Full Stack Developer, built end to end web applications involving Webhooks, Websockets, Audio Streaming, Internet Telephony, Authentication, UI & UX in Material Design, Database design and Queries; Owned repositories of 2 core features; Conducted Technical Interviews & Training Sessions for Freshers.
May 2014 - July 2014 | Internship at QORQL, Digital Healthcare Startup
Researched and developed edge detection algorithms that were used in a scanner app on android. Developed a custom heuristic algorithm to identify paper documents. **Technologies - Matlab, OpenCV, Java**

June 2013 - July 2013 | Internship at BHEL, Electronics Division
Modeled and simulated solar cells. Implemented & analysed the performance of "Perturb & Observe" and "Incremental Conductance" MPPT algorithms. **Technologies - Matlab (Simulink)**

SELECT PROJECTS

Selfie Based Song Recommendation
Technologies - Theano, Python, AngularJS, Flask, AWS
Trained a convolutional neural network on an EC2 instance to recognize emotions. A collection of 35000 pre-classified photos were used. Selfie captured in real time was passed through the trained CNN to determine the mood of the person. Based on the mood predicted appropriate song recommendations were made.

Smart Office (IoT @ IITR)
Technologies - Raspberry Pi, Arduino, Zigbee, Apache, PHP, JS
In order to reduce wastage of electricity at the student activity centre, built a wireless network of sensors and actuators to monitor and control all the appliances over a web application. The sensor data retrieved in real time was fed into a learning algorithm to understand the usage pattern and control the devices autonomously. The energy consumption decreased by 12%.

SKILLS: Python, MySQL, Javascript, Matlab, Shell, Django, MEAN, Product Architecture and Engineering

ACCOMPLISHMENTS

1. Received the **Annual Excellence Award** for the years 2012, 2013 and **Chittal Arasakesari Annual Excellence Award** for the year 2014 by IIT Roorkee Heritage Foundation
2. Won **First** place in the **Annual Techno Hobbies Club Exhibition- Shristi 2013** for building & programming a **Room Cleaner Robot**
3. Won **Second** place in the event titled 'Prototype' for designing a **smart footwear** for the blind during Cognizance, The Annual Tech Fest of IIT Roorkee in 2013
4. Won **First** place for building a *miniature centrifugal water pump and an automatic elevator* in the **Inter School Science Exhibition** organized by Silicon Valley School
5. Was presented with the **Prathibha Puraskara Award** by Karnataka State Government for standing first in my school in grade X.

YOUNG Achievements
Was featured on **The Hindu** (Link)**, Times Of India & Vijay Times** with my **2kg Bucket Washing Machine** and other inventions.

LEADERSHIP EXPERIENCE

August 2013 - July 2014 | Secretary of Electronics Section, Hobbies Club
❏ Through an effective design & implementation of the **Budget Plan**, procured necessary inventory and reference materials to enable students to pursue projects in Robotics, Internet Of Things and Machine Learning.
❏ *Brought in professionalism by incorporating Research Scholars & students from the Entrepreneurship Development Cell to guide fellow members to focus on building products rather than merely tinkering.*
❏ Organized many lectures and practical sessions related to Sensors, Actuators, Robot Kinematics, Programming with Raspberry Pi, Arduino, wireless communication in Zigbee, Bluetooth and Neural Networks for Robots.
❏ Lead a team of 5 members to organize a workshop called **ROBOMETRY** during Cognizance 2014.
1. Participants had to run a line follower robot on a random piece of curve printed on a flex sheet.
2. Use the aberrations in the sensor data array to predict which shape/function the curve best represented, and comment on it's meta features such as the eccentricity and radius of curvature to support their prediction.

July 2012 - May 2015 | Class Representative
❏ Acted as a bridge between administration and the class, aiding my fellow mates with their daily problems.
❏ As part of planning the course curriculum, was involved in negotiating with Professors of different departments convincing them to offer electives that the students were interested to pursue.
❏ Mentored juniors, to help them in the process of planning their academic courses.
❏ Organised an Industrial Tour to ISGEC Heavy Engineering Ltd. & Saraswathi Sugar Mill in Spring 2013.

2014 - 2015 | Teaching Assistant
Assisted I, II & III year students in tutorial and practical sessions of the following courses respectively:
EC-101A : Computer Systems and Programming under Dr. Millie Pant in Autumn 2014,
PP-214 : Heat Transfer under Dr. Sujay Chattopadhyay in Spring 2014,
PP-324 : Engineering Computation under Dr. Jaydev Dabas in Spring 2015

SPORTS
Enjoy skating and have been a prominent member of the In-line skating team of HEC at IIT Roorkee since 2013