

Akash Mehta

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D.O.B – 17th September 1993

Objective: - Gain experience in industrial level Technical and Management skills that are directly related to Computer Engineering in the fields of Automation/ Software Development/ Algorithms and Embedded Systems.

EDUCATION

Boston University, Department of Electrical and Computer Engineering Master of Science in Computer Engineering	GPA – 3.74/4	Jan 2018
Manipal University, Manipal Institute of Technology Bachelor of Technology, Mechatronics Engineering	GPA – 7.4/10	May 2015

TECHNICAL SKILLS:

Languages: C, C++, Python, Java, R	Framework: ROS
Hardware Description Languages: Verilog	Operating Systems: Linux, Windows
Circuit Design and Simulation Software: KiCAD, Proteus, Gazebo	CAD Software: SolidEdge, ProE, AutoCAD
Areas of Experience: Path-Planning and Automation, Software Development, Embedded applications, Machine Learning.	

SUBJECTS:

Masters:

Advanced Algorithms and Data Structures, Artificial Intelligence, Embedded Systems, Machine Learning, Software Design, Project Management, Vision Robotics and Planning, Computer Hardware Fundamentals.

Bachelors:

Micro-controllers, PLC Programming, MEMS, FPGA and Verilog, Smart Prototyping, Electronic and Electrical Circuits, Digital Logic Designing, Hydraulics and Pneumatics, Mechatronics Systems and Fuzzy Logics, Material Sciences, Strength of Materials, Analog System Design.

RELEVANT EXPERIENCE:

- **Path Planning for Self-Driving vehicles/robots (Position – Research Assistant for Boston University) Feb2017 - Present**
Part of a team working on research and development various applications pertaining to self-driven vehicles/robots. Responsible for Path-Planning algorithms. Worked with RRT, A* and Greedy, along with their variants.
https://github.com/BU-STRIDE-Lab/Racecar/tree/master/navigation/Path_planning
- **Genetic Algorithm for Simulating Fail Scenarios for planning algorithms (Position – Research Assistant for Boston University) Feb2017 – Present**
Part of a team working on research and development various applications pertaining to self-driven vehicles/robots. Worked on creating an algorithm, using Genetic Mutation, for an adversarial system, that generates paths designed to cause a planning algorithm to fail.
<https://github.com/BU-STRIDE-Lab/Racecar/tree/master/Generator/LooseFiles>
- **Inter-Communication for Path prediction of automated vehicles (Curricular Requirement ME740): Feb2017 - May2017**
Individual Masters project for generating a model for communication protocols in a completely automated traffic grid. This project mainly focused on Communication protocols and Path Planning Algorithms. –
<https://github.com/Akuman22/FullyAutomatedGridControl>
- **MPU-9250 Firmware :**
Worked on coding firmware for the IMU, MPU - 9250. Created functions for Master-Slave I2C control of the Magnetometer, and the DMP, ICM – 20648.

ADDITIONAL EXPERIENCE

- **High Response Image-Tracking system:** Developing a highly-responsive and real-time embedded application for object tracking with a Python coded predictive Control Algorithms using Gumstix Verdex and a ROS framework.
- **Machine learning algorithm to analyze lung cancer through CAT scans:** Using various Neural Network concepts to develop a classifier for recognizing Cancer tissue in lung CT scans. (Rank 350/1972) – <https://www.kaggle.com/c/data-science-bowl-2017>
- **Wireless Automated Electronic Queuing System:** Developed an automated polling system for multi-node to single node master slave queuing system.
- **Gesture Controlled Robotics:** Made a gesture controlled car using IMU - MPU-6050 with wireless control using XBEE.

- Wingfotech Pvt. Ltd.** **R&D Head** **New Delhi, India** **(Jan 2016 – May 2016)**
- Held workshops all over India for Engineering students on STEM topics – Robotics, IOT, Solar Power, Android App. Dev.
 - Made Embedded Projects that pertained to educational purpose – Gesture Controlled Car, Sun Tracking Solar Panel, Bluetooth controlled Home Automation, Biped, LDR Keyboard
 - Made Videos on these projects for marketing purposes (www.facebook.com/pg/wingfotech/videos/)
- RS Barcoders Pvt. Ltd.** **Intern** **New Delhi, India** **(Jan 2015 – May 2015)**
- Part of my Undergraduate Final Year Project. Developed Wireless Automated Electronic Queuing System that was required by the Sikkim Manipal General Hospital.
 - Was tasked with the R&D of the project, along with the procurement and Manufacturing of the parts.
- Edubotix Innovations** **Industrial Training** **Ahmedabad, India** **(June 2014 – Aug 2014)**
- Industrial Training on Micro-controllers and Robotics.
 - Worked on multiple projects – Biped, MPU - 6050 Gesture Controlled Bot, Wall follower, People counter, etc.
 - Worked in Mechanical Lab for manufacturing Prototypes (Using Lathes, Drills, etc.)

MISC. EXPERIENCE

- Boston University** **Teaching Assistant** **Boston, MA** **(Nov 2016 – May 2017)**
- Teaching Assistant for an undergraduate course, EK210 - Intro to Engineering Design
 - Mentoring students in basic concepts of Embedded, Electrical and Electronics along with assisting them with their projects.

EXTRA CURRICULAR

- IEEE General Secretary:** IEEE student branch Manipal. In charge of organizing over 200 students for National Level events. **(Sept 2013 – Sept 2014)**
- Technical Head:** IE Mechatronics student branch Manipal. In charge of holding events and Workshops for Students **(Sept 2013 – Sept 2014)**
- Ek Sangharsh Core Team:** Delhi based NGO. Held events to raise money to provide for Local orphanages. **(Sept 2013 – Sept 2014)**