

RACHITH PRAKASH

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EDUCATION

UNIVERSITY OF MARYLAND, A. JAMES CLARK SCHOOL OF ENGINEERING	College Park, MD
<i>Masters in Robotics</i>	GRE QUANT: 169 05/2020

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL (NITK)	Mangalore, India
<i>Bachelor of Technology in Electronics and Communication Engineering</i>	GPA: 7.99/10 05/2016

- **Honors:** Recipient of All India Engineering Entrance Exam (AIEEE) merit Scholarship – Full tuition waiver. Awarded by Ministry of Human and Resource Development, India to Top 0.2% of candidates.

PROFESSIONAL EXPERIENCE

MICRO FOCUS	Bangalore, India
<i>SENIOR R&D ENGINEER</i>	09/2016 – 07/2018

- Developed shell scripts to streamline configuration and installation of Operations Bridge Reporter (OBR) product.
- Headed the maintenance, installation, configuration of Vertica database to meet the requirements of OBR.
- Delivered training of OBR product to new team members, customers and support team.
- Alongside being a developer, worked with customers and Micro Focus support teams across the world to provide customer support.

Credr	Mumbai, India
<i>Data Analyst</i>	05/2015 – 07/2015

- Scraped data from various automobile websites selling used vehicles to build a database for competitive pricing.
- Developed basic mathematical models for price estimation based on factors like model, on-road price, year, variant, etc using Python.

Robert Bosch Business and Engineering Solutions Ltd., EBB Department	Bangalore, India
<i>Technical Intern</i>	06/2014 – 07/2014

- Developed C codes for interfacing different modules of Altera FPGA with NIOS-II processor to service interrupts from timer and GPIO modules.

COURSEWORK/SKILLS

Graduate courses: *Computer Vision, Control of Robotic Systems, Robot Modeling*
Software Skills: MATLAB, shell scripting, Python, Perl, VHDL, C, LaTeX, Java, HTML5 (basics), MySQL (basics)
Tools Used: V-Rep, IrSim, PSpice, NgSpice, Magic, TINA, Docker, Kubernetes, Vertica
Certifications: SAFe 4.0 for Teams Course

RESEARCH/PROJECTS

Panorama Stitching	10/2018
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- 2-Dimensional panorama stitching.

Color Segmentation using Gaussian Mixture Models (GMM)	09/2018
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- Implemented Expectation Maximization algorithm to find the maximum posterior estimates for GMM to segment colours.

Brain Computer Interface, Undergraduate Research, NITK	07/2015 – 05/2016
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- Completed data collection of 50 volunteers by recording their EEG signals corresponding to imagined left/right arm movement using a 16-channel headset Epoch by Emotiv.
- Researched and implemented pre-processing techniques, feature extraction techniques, machine learning algorithms like logistic regression, linear regression, random forest to obtain accuracy of 80% on the dataset for 2 control signals in real-time.

Finite State Machine implementation, NITK	01/2015 – 04/2015
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- Vending Machine was implemented – Finite State Machine with 8 states is implemented using MOSFETs.
- The project achieved low power consumption and minimized delay errors.

FPGA Based Gaming-Spooky Car game, NITK	08/2014 – 09/2014
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- Project was implemented on 'Nexys4 board', programmed using Xilinx's ISE Design suite in VHDL.
- Input through buttons were relayed to the board to control the on-screen virtual object to avoid obstacles in real-time.

Radar using Arduino and Ultrasonic Sensor, NIT-K	09/2014
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- Arduino-Uno micro-controller, servo motor and an ultrasonic sensor used to visualize real-time 2-D radar using processing software.

Active Noise Cancellation, NIT-K	04/2014
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- The project aims at removing noise using adaptive Least Mean Square Algorithm.

- The project was implemented on **DSK-C6713** DSP board using Code Composer Studio.

Autonomous Robot Navigation, IEEE Student chapter, NIT-K

2013 - 2014

- Core member of the project team involved in developing communication and navigation algorithms.
- The project involved movement of the robot from its current position to a final location based on GPS co-ordinate input.
- The robot reaches its destination avoiding obstacles using feedback from ultrasonic sensors.

LEADERSHIP/TEACHING EXPERIENCE

Bhumi Organization, Education Volunteer, Bangalore, India

07/2017 – 03/2018

- As a team of 4 volunteers, we mentored high school students from poor economic background to build remote-controlled bot in 7-8 months duration.

Peer Mentoring Programme, Peer Mentor, NITK

07/2015 – 11/2015

- Mentored third year undergrads on sensors, micro-controller MSP430 with hands on experiments to build a customized functioning bot.

ACHIEVEMENTS

Secured All India Rank 1354 among 1 million students in AIEEE entrance examination.

2012

Secured a rank of 5 out of 100 students in an examination conducted by IAPT in Physics and Chemistry.

2012

Recipient of Certificate of Merit for securing a GPA 10 on 10 in AISSE conducted by CBSE.

2010