Varun Nambiar

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EDUCATION

Georgia Institute of Technology – Atlanta, GA *Aug 2013 – May 2017 (tentative)*

- B.S. in **Electrical Engineering**; Minor in **Economics** (**MS** in **ECE** from **Fall '17 to Spring '18)**

WORK EXPERIENCE

Florida International University – Miami, FL *Jun 2015 – Aug 2015*

Research Intern (NSF REU)

- Implemented a localization algorithm in **GNU Radio** and **Matlab** that captures ambient GSM signals from cellphones.
- Indoor localization error consistently within 10 m.
- Programmed a **USRP E310** to capture the GSM signals and configured a **USRP N210** as an **OpenBTS** cell tower.

***Wipro Ltd*. –** Bangalore, India *May 2014 – Jul 2014*

Hardware Engineering Intern

- Worked in **Design Validation** of the Mission10x Unified Learning Kit (ULK) Board
- Debugged a **TI OMAP 3530** and **Spartan-6 FPGA** using **C** and **Verilog**

RESEARCH

Georgia Institute of Technology – *Intelligent Vision and Automation (IVA) Lab* **–** Atlanta, GA *Jun 2016 – Current*

- Developing a method to perform pose-estimation and control of a **robotic manipulator** using **computer vision** techniques.
- Implemented the modeling and computer vision elements of the project using **Python**.
- Developed **communication** and **team working** skills.

Georgia Institute of Technology – *Inan Research Lab* **–** Atlanta, GA *Aug 2014 – Apr 2015*

- Designed and built circuits for a bicycle handle to capture **ECG signals** and measure **grip strength**.
- Programmed an **Arduino** microcontroller in **C** to capture and graph received signals.

PROJECTS & RELEVANT COURSEWORK

VIP TerraBots Planning Team

- Developed and implemented the code on a team for multi-agent path planning in **Python**.
- Worked with path-planning algorithms such as Potential Fields and Fast Marching with limited temporal planning.

helloEarth – A new way to experience the news.

- Wrote an application that scrapes news websites and displays breaking news stories at their geolocation on a 3D globe.
- Developed the server side HTML scraper in **Python** and the complementary **iOS** app in **Objective-C.**

Autonomous Robot Navigation

- Programmed in **Assembly** for the robot to travel to given way points.
- Extended the ISA of the 'microprocessor' on the robot using **VHDL**.
- Developed error compensating algorithms to keep robot on track in dynamic environments.
- Average time for completion was 61 seconds, other teams had an average exceeding 5 minutes.

ACTIVITIES & ACHIEVEMENTS

- **3rd Place** in Georgia Tech Hacklytics 2016 – Developed an application that predicts crime in NYC
- Member, **Tau Beta Pi** Engineering Honor Society – Participate in volunteering events every semester.
- Former **Co-Captain** of FRC Robotics Team 1923

SKILLS

- ***Programming:*** Java, Python, C, C++, Objective-C, MATLAB, R, Shell, Verilog, VHDL, Spice
- ***Devices:*** USRP E310, OMAP 3530, Spartan-6, ARM Cortex-M3, Arduino, Oscilloscope
- ***Economics:*** Game Theory, Global Financial Economics, Microeconomics, Macroeconomics