

SAMREEN FARIHA ISLAM

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EDUCATION

University of Virginia | School of Engineering and Applied Science *Expected Graduation: May 2018*
Major: Mechanical Engineering *Minor: Design Integration, Computer Science* *GPA: 3.84*
Honors: Dean's List, 2017-18 Recipient of the Walter and Barbara Pilkey Scholarship

TECHNICAL SKILLS

Programming Skills: **Java, C++, MATLAB, Python, PHP, HTML, SQL**
Operating Systems used: **Windows, Linux**
Software Skills: **ROS, Arduino, Autodesk Inventor, SolidWorks:** for CAD, FEA and drafting, **ANSYS** for FEA
Manufacturing Skills: Metal **lathing:** turning, facing, boring shafts and bushings, **milling:** Aluminum beams, using Afinia, Makerbot and Ultimaker **3d printers, GD&T**

LEADERSHIP

- **Founder, Purif-I: Water Purification** *Fall 2016 – Present*
Propose and develop technology for removing Arsenic/Fluoride from water in developing countries.
 - **President, Mechatronics and Robotics Society: HoosMining** *Fall 2017 – Present*
Lead, manage and delegate tasks for design, funding, budget allocation, sponsorship and events
Build mining robot for Mars in interdisciplinary team for the NASA Robotic Mining Competition
Brainstorm, prototype and design CAD models for auger lifting, screw propulsion and other mechanisms
Perform finite element analysis to assess structural stability of robot. Machine beams, shafts and other parts
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PROJECTS AND COUREWORK

- **Autonomous Mobile Robots:** Simulated robot locomotion and behavior using MATLAB. *Fall 2017*
Employed ROS to implement kinematics, control, sensing, localization, mapping, path and motion planning.
 - **Self-tuning Guitar:** Designed and implemented self-tuning mechanism using PID algorithm. *Fall 2016*
 - **Smart Greenhouse:** Built thermoregulatory control system displaying information on the web. *Spring 2016*
 - **DeliveryBot:** Built and coded a line-following robot receiving commands over the internet. *Spring 2016*
 - **Homing:** Prototyped position correction mechanism with hall sensors for mobile drama robot. *Winter 2016*
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WORK EXPERIENCE

- **Research Assistant | University of Virginia, Department of Electrical Engineering** *Summer 2017*
Proposed, designed, prototyped and assessed performance of rehab knee sleeve embedded with IMUs. The knee sleeve is being further developed with additional sensors as a 4th year capstone project.
 - **Intern | Technohaven Co Ltd** *Summer 2015*
Employed Apache, SQL and PHP on a server to launch framework of Moodle E-learning platform.
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ACTIVITIES AND INTERESTS:

- **Technology Leaders Program:** formulate and employ design concepts on interdisciplinary team projects
- **Society of Women Engineers:** actively engage with women and encourage them to pursue engineering
- **Computers4Kids:** mentor children and closely work with them to implement their ideas into practical projects (currently building pressure-triggered LED shoes with a mentee)
- **FoodAssist:** fight food insecurity by redistributing leftover food from sororities, fraternities and events