

Aamir Husain

📍 Chicago, IL

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📁 Experience

Robotics & Automation Engineering Intern | Siemens

Jul 2018 - Sep 2018

📍 Princeton, NJ

- ↔ Worked with a small team of engineers to design a highly modular and fully autonomous farming system
- ↔ Improved existing performance by creating a scalable, decentralized, multi-agent scheduling and path planning algorithm using ROS, Python, and object oriented programming to control and coordinate a fleet of mobile robots

Software Developer & Consultant | FAST Enterprises

Aug 2015 - Aug 2017

📍 Washington, DC

- ↔ Developed new and simple online tax forms (primarily with SQL and .NET) for the residents of Washington, DC which drastically improved the way both locals and government workers handle taxes within the District
- ↔ Listened to customers' needs with client-side consulting to implement state-specific tax laws in a user-friendly way

Assistant Chef | F Street House

Aug 2014 - May 2015

📍 Washington, DC

- ↔ Worked in a fast-paced, unpredictable environment to prepare dishes for events hosted by GW President Knapp at his campus home

Research Assistant | GWU Nanomedicine & Tissue Engineering Lab

May 2014 - Dec 2014

📍 Washington, DC

- ↔ Studied the proliferation, adhesion, and viability of osteochondral stem cells embedded within a SLA 3D printed scaffold
- ↔ Designed a new 3D-printing tray for more consistent, high-quality samples of scaffolds for implanting the stem cells

R & D Intern | Spine Wave, Inc.

Jun 2013 - Aug 2013

📍 Shelton, CT

- ↔ Designed prototype housing for a spinal prosthetic implant gun (StaxX XD) which included force and distance sensors to measure human effort and material stability when using the device
- ↔ Hands on experience with designing and building circuits (amplifiers, Wheatstone bridge difference measurement), and extensive use of SolidWorks and high quality 3D printing

🎓 University

Master of Science: Robotics

Northwestern University '18

Bachelor of Science: Biomedical Engineering

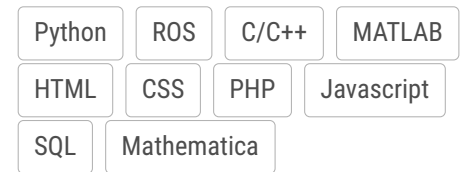
George Washington University '15

Istanbul Exchange Program

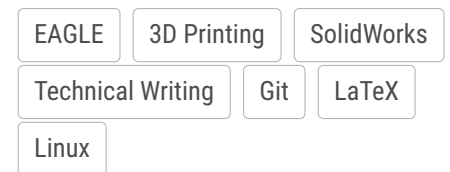
Boğaziçi Üniversitesi '13

🔧 Skills

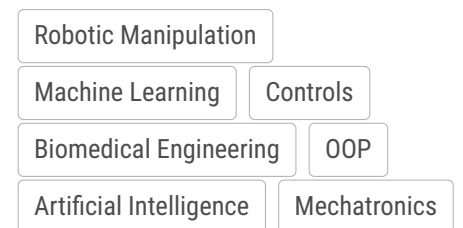
</> Programming



⚙️ Tools



💡 Concepts



📞 Contact

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Selected Projects

Multi-Robot Teleoperation & Localization | MS final project

Apr 2018 - Present

📍 Evanston, IL

- ↔ Final Masters project that involves the construction of three mobile omni-directional robots each equipped with a delta robot arm, as well as developing code for single agent localization and multi-agent formation control
- ↔ Low level control done using C/C++ and higher level robotic control uses custom and open source ROS packages

Day Zero Predictor | Machine learning on a global scale

Apr 2018 - Jun 2018

📍 Evanston, IL

- ↔ Consolidated data on global water usage, population, and climate to train a machine learning algorithm that could predict when a country would reach its day zero to raise awareness for wasteful water consumption
- ↔ Trained an instance-based nearest neighbor model with 10-fold CV that performed with 88% accuracy

Argo: An Autonomous Suitcase | Constraints on mobile robots

Jan 2018 - Mar 2018

📍 Evanston, IL

- ↔ Designed and built a ROS-enabled autonomous mobile robot that uses multiple PID controllers, a monocular camera, and a Raspberry Pi to follow a moving target (AR tag) at an average human walking speed
- ↔ This project explored the constraints encountered when building mobile robots, as well as putting emphasis on human centered design to make products that are useful while staying friendly and inviting

Techtiles: Washable Biometric Clothing | Capstone senior design

Jan 2014 - May 2015

📍 Washington, DC

- ↔ Created a biometric shirt incorporating a fabric stretch sensor, accelerometer, and 3 lead ECG to measure heart rate, breathing rate, steps taken, distance traveled and energy expended
- ↔ End-to-end project using EAGLE, AutoCAD, 3D printing, C++, Arduino, PSPICE, and filter design

🏆 Second place in Pelton Senior Design Competition

Leadership

VP of Marketing

GW Class Council

As VP of marketing, I increased Class Council's impact by reaching out to over 12,000 students and improved Class Council's awareness on campus by over 300%. I also created a new flagship holiday event and led two others, each costing over \$7,000.

Content Team

TEDxFoggyBottom

Worked with a tenacious group of students to meticulously select speakers for one of the largest TEDx events in the country, reaching out to locals in the DMV area to showcase the people behind tomorrow's ideas in and around Washington, DC.