

Brooks Tawil

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Education

Rutgers University-New Brunswick

B.S. in Electrical and Computer Engineering

B.S. in Computer Science

GPA: 3.72/4.00

Awards: Rutgers Engineering Honors Academy, Consistent Dean's List Placement, James Dickson Carr Scholarship

Graduating in May 2019

Relevant Coursework: Data Structures, Computer Architecture, Discrete Structures, Probability and Random Processes, Circuits I/II, Systems Programming, Algorithms, Software Engineering, Digital Electronics, Computer Systems, Internet Technology, Intro to Artificial Intelligence, Intro to Machine Learning, Network Security

Skills

Advanced: Java, C/C++, Javascript, HTML/ CSS, Bootstrap, Django

Proficient: Ruby on Rails, Python, MATLAB, LaTeX, Go, MIPS, PostgreSQL, Node.js, Angular JS

Technologies: Google Cloud, AWS, Raspberry Pi, Arduino,

Developer Tools: VS Code, Eagle PCB, Android Studio, OrCAD

Experience

Citi Institutional Clients Group - Summer Technology Analyst - New York, NY

June 2018 - Present

- Join a team of software developers in the finance sector to build live tools for traders and other internal teams

Kedma Solar - Junior Developer - Tel Aviv, IL

May 2017 - August 2017

- Wireframed, implemented and deployed new features to company Android application used by users and technicians in the field
- Submitted and participated in code reviews commits for code during production that reached live users
- Used Ruby on Rails to integrate the backend data server to the front end user experience on multiple platforms
- Debugged and revised PCB designs for a company power meter using Eagle PCB designer for schematic design

Keyboard Learnability under Professor Janne Lindqvist - Research Assistant - New Brunswick, NJ January 2017 - May 2017

- Produced an android keyboard application used to monitor and record data relevant to use of the keyboard in the field
- Ran live field tests involving collection of data regarding the use of the keyboard and analyzed using common statistical methods
- Compiled notes and research into a technical paper using LaTeX following IEEE paper specifications for this project, as well as for the Windows Hello project, each totaling approximately 5000 words

Windows Hello under Professor Janne Lindqvist - Research Assistant - New Brunswick, NJ January 2016 - January 2017

- Ran usability studies and tests on the Windows Hello biosecurity protocol using iris, fingerprint and facial recognition
- Attempted to use common biosecurity exploits such as fingerprint recreation and facial spoofing to exploit
- Created a MATLAB program for accurately grabbing fingerprint edge data from a high resolution photograph of a latent print

Tabush Group - Research and Development Intern - New York, NY

May 2015 - August 2015

- Researched software components related to hosting virtualized instances of a client's desktop in an offsite environment
 - Assisted a team of junior and senior developers in creating multiple VM environments for use by various users
 - Explored the cost and benefits of various infrastructure and tech stack choices for potential data centers and cloud services
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Projects

Swarm Robotics

August 2017 - Present

- Rework existing open source swarm robotics projects by designing, printing and constructing a custom robotics platform
- Collect data demonstrating the efficiency gains made in puzzle solving that a swarm demonstrates in comparison to a single robot

Theta Tau - Webmaster

May 2017 - January 2017

- Designed built an official website for the Omicron Delta chapter of Theta Tau using HTML/CSS, jQuery, and Bootstrap from scratch
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Affiliations

Theta Tau - Co-ed Professional Engineering Fraternity - President

June 2018 - Present

- Lead and represent the premier professional engineering fraternity at Rutgers at events, conventions, and to other organizations
- Head an executive board and run meetings across all committees across the fraternity, ensuring each team sets and reaches their goals

Tau Beta Pi - Engineering Honors Society - Vice President

December 2017 - Present

- Served as an arbitrator between E-board and regular members for event coordination as well as news regarding the organization
- Head planning for the upcoming spring initiation and work alongside the rest of the E-board to get resources and manpower for events

Theta Tau - Recruitment Chair

December 2017 - June 2018

- Organized a team to coordinate six public events for the Rutgers Engineering community to recruit across the campus
- Headed social media and on the ground marketing efforts by advertising events and brought 100+ engineering students to our events