

Education

Rutgers, The State University of New Jersey

Expected May 2020

B.S. Computer Engineering

GPA: 3.8

- Double major in Computer Science and Computer Engineering with a minor in Mathematics.
- Areas of Focus: Data Structures, Algorithms, Operating Systems, Software Methodology, Computer Architecture, Electronics, Embedded Systems, Networking and Digital Logic Design. Current Subjects: Embedded Systems, VLSI Design, Analog Electronics, Natural Language Processing, Digital System Design

Projects

RU BUSEE (Python, Dart, SQLite, JavaScript)

In Progress

- Design and develop an API to predict Rutgers bus timings using TransLoc API.
- Creating a companion mobile app to view timings
- Using machine learning for delay prediction

Smart Lock (JavaScript, Python)

Mar. 2019

- Designed an entire smart lock platform and architecture with a team of 10 people.
- Worked with a team member to stream video from a Raspberry Pi using Websockets.
- Used Google Maps API to visualize reported data about suspicious activity
- Worked with a team member to create a REST API server using Django

Banking Server (C)

Dec. 2018

- Created a multithreaded, network connected banking server and client replicating banking functionalities.

Text Based Chess (Python)

May 2018

- Created a text based chess game in Python and implemented my own chess library.

Photos (Java)

Apr. 2018

- Created an Android app to create albums, add photos to albums, view photos, and add and search photo tags.

RUBus (JavaScript)

Jul. 2017

- Created a Pebble Watch app to show Rutgers bus timings using Nextbus API and Pebble.js.

Employment

Software Engineering Intern

May. 2019 – Aug. 2019

Accolade, Inc.

- Migrated old services used by developer teams. to use AWS CloudFormation
- Created a service to automate JIRA ticket creation using AWS Lambda, Github API and JIRA API.
- Contributed to an inner source project to validate AWS CloudFormation templates used by a large number of developers in the company.
- Worked with a group on interns on a capstone project to propose solutions for hiring and retaining nurses and presented the idea to executives.

Undergraduate Research Assistant

Jan. 2019 - Current

Cyber Physical Systems Laboratory, Department of Electrical and Computer Engineering, Rutgers University

- Funded by NSF REU
- Researched control systems and multi-agent reinforcement learning for underwater adaptive sampling and autonomous navigation.
- Designed a communications protocol and algorithm to be used for distributed sampling, task allocation, and coordination.
- Worked with team to create an IoT for underwater pollution monitoring systems
- Co-managed team of undergraduate students working on a mesh wireless topology for AUVs

Publications

M. Rahmati, **M. Nadeem**, V. Sadhu, and D. Pompili, "UW-MARL: Multi-Agent Reinforcement Learning for Underwater Adaptive Sampling Using Autonomous Vehicles," accepted in the *ACM International Conference on Underwater Networks and Systems (WUWNeT)*, Atlanta, GA, Oct. 2019.

Technical Skills

- **Languages:** Python, Java, C, MATLAB, JavaScript, HTML, CSS, Verilog/SystemVerilog
- **Tools and Technologies:** Git, Amazon Web Services, LaTeX, Node.js, Flask, Django, LTSpice, Cadence, Vivado