

# Neil Johari

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## Education

**University of Michigan** 2018 - 2021  
*B.S.E in Computer Science*  
GPA: 3.714 / 4.0

Current Coursework: Software Engineering, Computer Security, Compiler Construction

Completed Coursework: Discrete Math, CS Pragmatics, Data Structures & Algorithms, Intro to Computer Organization, Intro to Electronic Circuits

**Syosset High School** 2014 - 2018  
*Highest Honors, Mastery in Science*  
GPA: 8.636 / 8.0

## Languages

C++, C, Java, Ruby, Python, MATLAB

## Proficient Tools

Git, Vim, tmux, Linux, LaTeX

## Awards

**Dean's Honor List** 2019  
For maintaining above a 3.5 GPA with a minimum of 12 graded credits per semester

**Nassau County Legislature Citation** 2019  
For leadership and community engagement

**Bernie Goudreau Memorial Award** 2018  
For achievement in math and CS

**1<sup>st</sup> Place at Andromeda**  
**2<sup>nd</sup> Place at WAC** 2017  
For the creation of a machine learning model to analyze MRI scans of Alzheimer's disease patients using convolutional neural networks

**Gold Medal at Al Khalfus Math Fair** 2015  
For the creation of a model of video game hours played due to social influence with an analysis through machine learning

## Experience

**University of Michigan** 2019 - now  
*Instructional Aide for ENGR 100*

- Led two lab sections with 25 students each (teaching & grading)
- Produced tutorial videos and lab manuals on Serial Peripheral Communication, GPS, pointers, and other advanced topics
- Revamped lab activities by identifying student difficulties in lecture and lab to improve clarity and maximize learning
- Held office hours to help struggling students and provide challenges for advanced students

*Research Assistant*

- Pioneered a library for RFID communication via MFRC522 sensor

**MBuRST** 2019 - now  
*Project Team Lead*

- Designed and implemented a weather balloon payload to compare 4 GPS modules for sensor quality, usability, and data integrity
- Created a post-launch analysis plan to determine the most reliable and cost-effective GPS module for use in future ENGR100 and MBuRST balloon launches

**Triangle Engineering Fraternity** 2019 - now  
*Website Developer*

- Led design and implementation of new website using Ruby on Rails (RoR) and PostgreSQL, deployed via Heroku
- Architected layout to direct traffic towards recruitment pages

**Syosset High School** 2014 - 2018  
*Website Developer*

- Designed a new website using RoR, MongoDB and Redis
- Responsible for 280+ commits with 24,000+ changes
- Designed a sleek and ADA-compliant accessible interface

## Open Source Personal Projects

**Spacecat** 2019 - now

- Designed software to read and serialize weather balloon measurements using Google's Protobuf, utilized by MBuRST

**Scram** 2016 - now

- Programmed a transparent Ruby permissions system gem

**Mongoid Forums** 2014 - 2015

- Developed a RoR gem for forums with MongoDB integration

**AutoBroadcaster+** 2012 - 2014

- Published a Minecraft server-wide scheduled broadcasting plugin
- Downloaded 228k+ times