Muhammad Hamza Nasir

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OBJECTIVE

To tackle complex engineering obstacles with **ingenuity** and **teamwork** to further the **company mission**.

EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY

*Bachelor of Science in **Computer Engineering** expecting to graduate in the Fall of 2018*   August 2015-December 2018

- **Major GPA: 3.53, Cumulative GPA: 3.41**

WORK EXPERIENCE

Software and Controls Intern at NuMat Technologies, Inc.   May 2018 – August 2018

NuMat Technologies, Inc. is an advanced technology company innovating at the intersection of big data, material science, and hardware systems.

- Set up gas-test manifold with a variety of sensors and actuators to allow production of a specific kind of Metal Organic Framework (MOF).
- Developed full-stack web application to communicate with the gas-test manifold and its components so that chemists can observe and control its state remotely.
- Fixed long-standing bugs with existing systems and updated controller programs to comply with most recent code standards.

SKILLS

- Programming Languages: **Python**, **JavaScript**, **C**, Java.
- Platforms: **Arduino**, **Raspberry Pi**, ESP8266
- Linux System Programming
- **Front-end** and **back-end web development**
- **Git and GitHub.**
- **Database Organization and Management**
- Application Deployment with technologies like Docker and Heroku.

AWARDS AND HONORS

- College of Science **Dean's List Awardee** for Fall 2015, Fall 2016 and Spring 2017
- IIT **International Scholarship** awardee
- **IEEE-Eta Kappa Nu Delta chapter scholar for academic excellence**
- Won **touch-sensor-exclusive robotics competition** (See Projects/Maze Solving Robot)
- Newland's 70% scholarship awardee (High school)

PROJECTS

Personal Home Automation System
Arduino Controlled mini-home automation system for a room that **controls lights based on voice recognition** and **various sensor readings** (e.g. light, proximity). For example, when the light in the room is low and the proximity sensor registers a reading of someone's presence in the room, **a voice prompt** will ask the person whether he/she wants to turn on the lights.

Power-grid Simulator
Programmed a real-life **power grid simulation program** that distributes power to consumer units in a way that does not **overload power distribution systems** (i.e. Transformers, three-phase power sources etc.).

Lottery Simulator
Programmed a **lottery simulation program** that can support over 100,000 players with configurable prize distribution systems using **Java**.

Maze solving robot
Worked with a team to **engineer a small vehicle** out of LEGOs that uses **light and touch sensors** to **autonomously** navigate through any random maze with either physical or paper-tape walls using the **Handy-board microcontroller**.

LEADERSHIP AND COMMUNITY SKILLS

Pakistani Student Association
Treasurer
- Work with the president to organize and schedule events. Assume the role of the president in his absence.
- Responsible for deciding and altering budgets with the Office of Campus Life. Emailing cooperatively with fellow executive board members and outside parties.
- Conducting seminars and setting up conferences with the help of the executive board.

Beaconhouse Newlands Debating Society
Vice president
- Coordinated with Model United Nations exec-boards, conducted MUN trials and participated in conferences.
- Worked with coach and president to hold two debating sessions per week.