# Muhammad Hamza Nasir

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## OBJECTIVE

To tackle complex engineering problems with **ingenuity** and **teamwork** to accomplish the **goal of the company**.

## EDUCATION

**ILLINOIS INSTITUTE OF TECHNOLOGY**

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

- Relevant courses completed:
  - Object Oriented Programming
  - Introduction to Electrical Engineering
  - Circuit Analysis
  - Digital Systems
  - Data Structures and Algorithms
  - Digital Computers and Machine Language
  - Math: Calculus 1,2,3 and Differential Equations
  - Discrete Structures
  - Systems Programming
  - Introduction to Mechanics
- **Major GPA: 3.53, Cumulative GPA: 3.41**

## SKILLS

- Programming Languages: **Python**, **Java**, **C**, JavaScript, HTML.
- Platforms: **Arduino**, **Raspberry Pi**, ESP8266
- IDE's: PyCharm, Eclipse, IntelliJ, NetBeans
- Linux System Programming
- **Front-end** and **Back-end web development**
- Familiar with **Git Version Control** and **continuous delivery and integration** concepts (Chef, Jenkins etc.)

## AWARDS AND HONORS

- College of Science **Dean's List Awardee** for Fall 2015 and Fall 2016
- 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

***The Hover-disc***

Currently working with a team on an **Arduino controlled floating hover-disc** made from Styrofoam that senses and pushes away from incoming and approaching objects. Can be used to play real life air-hockey with feet. Expected to be completed before Spring 2017

***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.