Muhammad Hamza Nasir

✉ mnasir@hawk.iit.edu
🌐 hamzanasir.com
in linkedin.com/in/mhnasir/
⌨ hamzanasir

Skills

PROGRAMMING LANGUAGES

JavaScript

Python

Java

C

FRAMEWORKS

Node JS

Express JS

React JS + Redux

Tornado

Django

DATABASE SYSTEMS AND SCRIPTING LANGUAGES

PostgreSQL

MySQL

MongoDB

MICRO-CONTROLLERS AND COMPUTERS

Arduino

Raspberry Pi

ESP8266

CLOUD PLATFORMS AND VIRTUALIZATION

Docker

Amazon AWS/EC2

Heroku

Education

Illinois Institute of Technology

Bachelor of Science in Computer Engineering - May 2019

• Cumulative GPA: 3.52

Employment

NuMat Technologies, Inc.

Software and Controls Intern   May 2017 to Aug 2017

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

• Set up a **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 in **Python** using **Tornado** and **MongoDB** 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 (**PEP 8, ES6, Airbnb-Javascript**).

Projects

FakeAir - fakeair.herokuapp.com

Developed a **full-stack** airline web application using **Node JS**, **Express JS** and **PostgreSQL** with an intuitive front-end interface made using **Bootstrap**. No ORM was used to emphasize **SQL scripting and queries**. Deployed on **Heroku**.

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**.

Awards

Dean's List Awardee

All semesters in school except for Spring 2016

IEEE-Eta Kappa Nu Delta Induction

Inductions handed out to top 20% of batch

Leadership

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.