

# ASHANK BEHARA

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## EXPERIENCE

### Caesar Research Group @ UIUC | IoT Virtualization Researcher

📅 March 2020 – Present

📍 Urbana, IL

- Working on frontend infra team for large scale cloud based IoT simulations
- Currently developing React components using Typescript and linking to backend and writing unit tests using Immutable.js for Circuit Emulator
- Virtual Circuit Emulator tool is deployed to multiple UIUC courses

### Hack4Impact | Software Developer

📅 September 2019 – Present

📍 Urbana, IL

- Developing and shipping software to nonprofit organizations
- Full stack development using Flask, Node, React, SQL, MongoDB, etc
- Built ride sharing web application for UIUC students and shipped interactive project sharing platform

### DPQL Lab @ UIUC | Undergraduate Research Assistant

📅 June 2019 – December 2019

📍 Urbana, IL

- FindWheels study: tracking wheelchair falls to alert emergency services
- Data Analysis and Signal Processing using MatLab and Python

### RAAD Systems | Mechanical Design Engineering Intern

📅 June 2019 – August 2019

📍 San Jose, CA

- Designed 6-axis robot using Inventor given performance parameters
- Performed inertial and torque analysis for motor selection and to test functionality and implemented DH matrix for mechanics analysis

### Kod\*Lab @ UPenn | Summer Robotics Research Intern

📅 June 2017 – August 2017

📍 Philadelphia, PA

- Performed data analysis of turbulence for fleets of drones and assembled Minitaur Robot as part of joint partnership with Ghost Robotics
- Wrote Vicon system user guide for entire lab and debugging documentation

## SELECTED PROJECTS

### Kids Save Ocean - FateMaker | Full Stack Web Application

📅 January 2020 - Present

📍 Team

- Developing web application to empower environmental cleanup for youths
- Built project REST API, API wrapper, and schema and aided user auth backend
- Building multiple functional React components for different features
- Core functionality deployed with optimization development in progress
- Tech Stack: NextJS, ExpressJS, MongoDB Atlas, DraftJS, FuseJS, Redux

### DiaProb | Logistic Regression Machine Learning

📅 January 2020

📍 Individual

- Developed Diabetes Probability Predictor using a logistic regression model with training dataset from Kaggle
- Tech Stack: Python, SciKitLearn, Pandas, HTML, JavaScript, CSS

### Design for Recyclability | DoE and DFA analysis of Mechanical Redesign

📅 April 2019 – May 2019

📍 Individual

- Redesigned mechanical pencil using CREO for improved assembly efficiency and recyclability
- Performed 2k factorial Design of Experiments and DFMA analysis
- Tech Stack: CREO Parametric, APriori, MatLab

## EDUCATION

University of Illinois at Urbana-Champaign

B.S in Mechanical Engineering

Minor in Computer Science

📅 August 2018 - May 2022

## SKILLS

### Development

C++ JAVA Python Javascript  
MatLab NodeJS React Typescript  
MongoDB Git Flask SQL HTML  
CSS SciKitLearn Pandas Shell

### Modeling and Analysis

CREO SolidWorks Inventor  
Fusion360 Apriori Cura Vicon

## AWARDS

### GenuSim | 1st @ Autodesk Designathon

📅 November 2019

- 3D modeled knee injury simulator for ligament injuries for medical students at Carle Hospital

## LEADERSHIP

### NeuroTech @ UIUC | Co-Founder and VP

📅 September 2019 – Present

- Lead 40 person organization of PHD, Masters, and Undergraduate students
- Consulting for Ericsson and machine learning projects using EEG data from BCI headset

### i-Made | Engineer

📅 November 2019 – Present

- Lead development of online tool for analysis of Reddit posts portraying suicidal feelings using NLP to process text bodies

## CERTIFICATIONS

### Robotics: Perception | UPenn

📅 April 2020

In progress

### Robotics: Comp. Motion Planning | UPenn

📅 April 2020

Implemented A\* and Dijkstra's graph search algorithms in Matlab and learned fundamental robot kinematics

### Database Design and SQL | IBM

📅 January 2020

Basic database design and querying IBM DB2 cloud database using SQL nested in Python