

# Varsha Prasad

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**Technical Skills:** Python, C#, HTML, CSS, JavaScript, React.js, Arduino, MATLAB, R, UI/UX Design(Figma), Photoshop, DaVinci Resolve

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## Experience

### The Knowledge Society – 2nd Year

September 2020 – Present

- 10-month human accelerator program that provides exposure to emerging technology and social entrepreneurship
- Provides mentorship for projects and problems and a global community of students and alumni
- Opportunities like hackathons and challenges that provide real-world experiences

### UC Irvine BioRobotics Lab – Intern

July 2021 – Present

- Helped program a robot that measures ankle proprioception by a criss-cross test using C#
- Learned how to evaluate industry standards by reading research papers efficiently and performing a literature review
- Performed an Event-Related Potential(ERP) study to find a correlation between ankle movement and brain waves

### University of Waterloo – Research Assistant

May 2021 – Present

- Evaluating the processes used in the Chicago Police Department, Bureau of Detectives' Area Technology Centers; support centers that acquire and process digital evidence on a team led by Prof. McKay (UW)
- Part of a team that is using a combination of qualitative methods and data analytics (processing historical case data) to better understand the contribution of the centers in solving cases in the Chicago PD

## Projects

### Instacart Consulting Challenge

Dec 2020

- Acted as the project manager to delegate tasks, solve issues within the team and outline timelines
- Created a slide deck that showcased problems and a proposed solution
- Created complete UI/UX mock-ups for an improvement of Instacart's website using Figma

### Mind-Controlled Gaming System

Feb 2021

- Used an OpenBCI Ganglion Board and an EEG headset I created to detect the eye blinks of the user.
- Connected the board to play the 'Geometry Dash' game using python and the Brainflow library.

### TKS Moonshot Hackathon

May 2021

- As a Project Manager, led a team of 3 to research and create content like an article, video and website
- Researched a pill that uses nanobots to transport and aid areas with nerve damage with a specific family of serotonin
- Pitched and received feedback for ideas from VCs and CEOs

### Creating a Neurofeedback Program to Enhance Meditation

April 2021

- Constructed EEG headset and used OpenBCI Ganglion Board to detect different brain states with python and the library Brainflow
- Used auditory feedback to influence users during meditation sessions

### Positive and Negative Emotion Recognition

May 2021

- Did [google's crash course on machine learning](#)
- Learned ML through [datacamp.com](https://datacamp.com) and did a few start projects with guides(ex. clothes classification)
- Used TensorFlow to run an ML model to do binary classification on the "Feeling Emotions" Kaggle dataset
- Made a UI/UX mock-up of an app that could use the classification

### Neural Network From Scratch (Current Project, Github linked for progress)

May 2022

- Read [book](#) to understand all the concepts fully
- Followed along to fully create a neural network from scratch(built neurons, activation functions, cross-entropy loss, gradient computations using backpropagation and parameter updates using optimizers)

## Education

International Baccalaureate High School Student – St. Francis Xavier Secondary School

Sept 2019 - expecting June 2023