# SHUBHANKAR VALIMBE

Buffalo, NY

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## Education

**University at Buffalo, The State University of New York**                    **Sep. 2019 – May 2023**
*Bachelor of Science in Computer Science*                                                *Buffalo, NY*

### Relevant Coursework

- Web Applications
- Machine Learning
- Blockchain
- Data Mining
- Applied Statistics
- Modern Networking
- Algorithms Analysis
- Data Structures

## Experience

**The Research Foundation for SUNY**                                        **Feb 2023 – Present**
*Software Engineer Intern*                                                              *Buffalo, NY*
- Developed a training tool for research in the development of conversant augmentative communication systems, to monitor responses from individuals with complex communication needs (ALS, cerebral palsy, autism).
- Built a voice recorder in Python with PyAudio to record microphone input, used the **Whisper AI model for real-time speech-to-text** transcription and **Google Text To Speech API** for humane communication.
- Utilized **ChatGPT from OpenAI API** to generate appropriate prompts and initiate contextual task-driven conversations to determine which communication approach yields optimal responses.
- Performed natural language processing in Python using Natural Language Toolkit(NLTK) to judge a response and provide an assessment score for research purposes, which **improved the accuracy of responses by 45%**.

**Ruffalo Noel Levitz**                                                         **Sept 2020 – May 2022**
*Engagement Ambassador*                                                                 *Buffalo, NY*
- Promoted campaigns and events to raise money and other kinds of donations by exhibiting social selling skills.
- Worked in a team environment to raise over **$1,000,000** by maintaining positive relationships with donors.
- Researched potential donors to gain insight into needs, beliefs and donation habits to **increase contribution by 20%**.

## Projects

**Drug Origin Tracer (DOT)** | *Solidity, JavaScript, HTML, CSS*                    **November 2022**
- Developed an Ethereum-based DApp for chain of custody record tracing at each level of the medical drug supply chain.
- Designed smart contracts in Solidity to verify a drug's origin at each level and store the transaction on the blockchain.
- Built the UI in ReactJS, interacted with the blockchain using the web3 JS API and deployed an ERC20 token (DOT).
- The efficiency of obtaining data insight on inventory and stock levels throughout the supply chain **increased by 70%**.

**Self-Diagnosis App** | *Python, JavaScript, HTML, CSS*                            **August 2022**
- Built a web app in JS, HTML and CSS that allows the user to diagnose a disease through it's signs and symptoms.
- Preprocessed the dataset using NumPy & Pandas, and implemented ML algorithms using scikit-learn in Python.
- Devised high-performance machine learning systems to implement classifier techniques and detect outliers accurately.
- Achieved an **accuracy rate of 98%**, significantly reducing the time and resources required for preliminary diagnosis.

**Chat App** | *Python, JavaScript, HTML*                                        **December 2021**
- Created a chat app using React.js where users can text and share media content (images, audio, video) with each other.
- Implemented a TCP socket server and a HTTP server which parsed raw HTTP requests and sent appropriate responses.
- Applied **RESTful API providing CRUD operations** for users and offered security against HTML injection attacks.
- Maintained user's **chat history using MongoDB** database and utilized cookies to provide user authentication.

## Technical Skills

**Programming Languages**: Python, JavaScript, HTML/CSS, Scala, C, C++, Java, Solidity, TypeScript
**Developer Tools**: VS Code, Intellij IDEA, Google Colab, Jupyter, Repl.it, Docker, GitHub
**Libraries**: React.js, jQuery, Scikit-Learn, Tensorflow, PyTorch, Keras, Web3, NumPy, Pandas, Matplotlib
**Technologies/Frameworks**: Ajax, Node.js, Express.js, Bootstrap, Flask, Heroku, SQL, MongoDB

## Leadership / Extracurricular

**UB ACM [Association for Computing Machinery]**                              **Fall 2021 – Present**
*Vice Chair*                                                                        *University at Buffalo*
- Hosted organized biweekly HackNights where members developed socially relevant projects for underprivileged people.
- Revamped and promoted the HackNights to new students and **improved member participation by 25%**.
- Maintained a working relationship with the ACM parent branch and managed the Education and Audit Committee.