VIKRAM PATIL

📞 (413) 345 3441 ✉ vikramspatil1@gmail.com 🔗 linkedin.com/in/vikrampatil

Education

University of Massachusetts Amherst — **Aug 2019 - May 2023**
Bachelor of Science in Computer Science - GPA: 3.82 — *Amherst, Massachusetts*

Relevant Coursework :
Data structures and Algorithms, Programming Methodology, Computer Vision, Computer Systems, Data Management, Artificial Intelligence, Information Retrieval, Linear Algebra, Machine Learning, Software Entrepreneurship, Reasoning under Uncertainty, Multivariate Calculus

Skills and Qualifications :
- **Programming Languages:** Python, Java, JavaScript, Lua, C++. **Web Technologies**: HTML, CSS, React, Next.js **Tools & Platforms:** Git, Linux, Jenkins, Docker, Matlab, MongoDb, MySQL, Selenium, CI/CD, FastAPI, GraphQL

Experience

Raytheon RMD — **August 2023 − Present**
Systems Test Engineer — *Marlborough, USA*
- Developed data analysis tools, scripts and devised flight scenarios to verify SPY6 (AMDR) A-spec requirements. Participate in VI meetings with customer regarding requirement sell-off.
- Analyze live flight test and simulation data for SPY-6 (AMDR) to verify that radar meets criteria for successful high stake tests.

Commscope — **May 2022 - August 2022**
Software Intern — *Lowell, MA*
- Automated testing on ServAssure NXT Alarm Central, enhancing identification and prioritization of service impairments in cable network elements, resulting in a 30% efficiency boost in issue detection and resolution
- Created test framework to validate Alarm Central data against On-Demand data across multiple fiber-nodes, significantly reducing testing time and promptly identifying cable network discrepancies and sending alerts in real time

Advaint Technologies — **Nov 2021 − Feb 2022**
Software Engineering Intern — *Pune, India*
- Utilized machine learning techniques to detect crowds, monitor entry/exit movements, and identify individual loitering in CCTV footage across various cameras, leveraging Roboflow.
- Developed a data interface bridge connected to the IoT engine to initiate scenes upon detecting events in the video feed.
- Archived event details and associated video stream links in PostgreSQL for potential future analysis to utilise for test purposes.

BUILD UMass — **Aug 2021 - May 2022**
Software Developer — *Amherst, MA*
- Collaborated in a team of 5 to create the landing page and dashboards of websites for startups with low resources (Pro-Bono) using MERN stack, Javascript, FastAPI.

Projects

Emotion Analysis through Voice
- Created a strong voice emotion analysis model utilizing Intensity, MFCC, Peaks, and Power Spectrum features, achieving 93% accuracy
- Utilized N-fold cross-validation and confusion matrix techniques to train the data, improving model accuracy using Python, Matplotlib, Scikit learn

Inbox Inventors (Team Project)
- Engineered a web application, sponsored by UKG, for a workforce management system, streamlining task handling, PTO management, and training assignments, resulting in a 30% increase in task completion efficiency while providing comprehensive work cycle tracking for managers and employees using React, PostgreSQL, Knex, Express, NodeJs.

Search Engine
- Built an information retrieval system that tokenized, stopped, and stemmed a large corpus of text documents.
- Designed and implemented the PageRank algorithm to rank a set of 5.7 million URLs based on their importance.
- Implemented multiple ranking measures, including Query Likelihood and BM25, to evaluate the search engine performance.

Exploratory Data Analysis of Abalone Dataset
- Analyzed the Abalone dataset to conduct descriptive analysis.
- Imported and cleaned up 4500 sets of quantitative data, for boosted efficiency during analysis and model creation utilizing advanced statistical techniques to uncover valuable patterns and trends.
- Allowed for an informed examination of mollusk height length etc by sex using various plots to summarize data.

Leadership / Extracurricular

Umass Tennis — **Sep 2019 − June 2022**
Athlete — *University of Massachusetts Amherst*
- Served as a organizer within the UMass tennis team, facilitating the planning and execution of selections and scrimmages against teams from different colleges