Vikram Ramavarapu

Github: https://github.com/vikramr2 vikramr2@illinois.edu
Linkedin: Vikram Ramavarapu

Education

University of Illinois at Urbana-Champaign Aug. 2019 – Present
BS. Mathematics and Computer Science *Champaign, IL*

- **GPA**: 3.8
- **Course Work**: Adv. Algorithms, Deep Learning, Web Programming, Database Systems, Scientific Computing, Partial Differential Equations

Work Experience

Human Factors and Aging Laboratory, UIUC Jul. 2020 – Present
Undergraduate Research Assistant *Urbana, IL*

- Created Amazon Alexa skills with fully functioning voice and visual interface using AWS Lambda. Took into account **Nielsens Usability Heuristics** to ensure the app is usable by elderly and those with mobility disabilities. **NodeJS/AWS Lambda**
- Designed Data Scraping/NLP Algorithms in Python to process and categorize Alexa usage data. Design and use of Recurrent Neural Network to categorize past usage of Alexa by target population for analysis. **Python: PyTorch/Pandas**
- **Undergraduate Research Symposium 2021:** Created a presentation for independent project under the laboratory. Wrote the abstract for the research project and showcased the development process of the Alexa Application.

Exelon Aug. 2021 – Dec. 2021
SWE Co-Op *Chicago, IL*

- Implemented pattern matching algorithms to extend automation software to be compatible with all nuclear reactors. **Python: Pandas/RegEx**
- **UI/UX design** for software that automatically inspects reactor output data to generate a precise statistical nuclear design report. **Python: Tkinter/Matplotlib**

IT Partners, University of Illinois at Urbana Champaign Mar. 2021 – May 2021
Full-Stack Web Developer *Urbana, IL*

- Designed donations feature in UIUC College of Education Website. **HTML/CSS/JavaScript (eleventy.js)**
- Content management across all features od College of Education website. **SiteFinity CMS**
- Testing of usability heuristics and accessibility in College of Education's website.

Inprentus Inc. Jun. 2018 – May 2019
Research and Development Intern *Champaign, IL*

- Developed software from scratch to automatically generate precise statistical product reports from microscopically scanned diffraction gratings. Recipients of these reports included NASA and SLAC (Stanford). **Python (Matplotlib/PyGTK)/Java**
- Material indentation simulations in a joint project with UC Berkeley. **Mathematica**

Technical Reports

Voice-Activated Digital Home Assistant Application/Skill Development: Instructional Support and Recommendation Application Development for Older Adults with Mobility Disabilities (TechSAge-TR-2108).
***V. Ramavarapu**, T. Kadylak, W. Rogers (2021).*
Rehabilitation Engineering Research Center on Technologies to Support Aging-in-Place for People with Long-Term Disabilities.

Technical Skills

Programming Languages: Python, C/C++, Shell, Java
Data Analytics: R, MATLAB, NumPy/SciPy/Matplotlib
Front End: React, JavaScript, HTML, CSS, BootStrap, JQuery, p5.js, Content Management Systems
Back End: Django, Node.js, Express.js
Databases: SQL, MongoDB, Neo4j
Machine Learning: PyTorch, Tensorflow, OpenCV, OpenAI Gym, Amazon Alexa SDK

Projects

- **HackIllinois 2021**: UIUC Hackathon. Built a web application with a front-end, back-end, and database and entered it into competition. **ExpressJs/MongoDB/HTML/CSS**
- **DoveMed**: Healthcare Startup. Development and UAT of a feature called MyCircles to connect people with various health conditions into a community, and a feature called Physician Blogs for the sharing of information by licensed Physicians. **HTML/CSS/JavaScript**
- **Cyclicity Analysis on COVID in North America**: Cyclicity analysis is the technique of aggregating regional linear time series to map spread of a signal. Using American and Canadian provincial COVID time series, spread is mapped across North America. **Python: Pandas/Matplotlib/Jupyter Notebook**