Sudarsna Mukund

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EDUCATION

Northeastern University
Boston, MA

Bachelor of Science Information Technology and Cybersecurity, cum laude, Dean's List
December 2021

- GPA: 3.6

EXPERIENCE

Software Engineer
January 2022 – Present

Target Corporate
Minneapolis, MN

- Architected ROS2 solution to read price tags from store shelves using YOLOv8 object detection and EasyOCR character recognition
- Restructured machine learning outfit recommendation code to modularize score generation and random forest processes
- Consolidated room-planner and furniture workflows to improve code maintainability and wrote a pyspark function to filter out 3D assets
- Conducted a literature review and comparative analysis of best methods for 3D mesh metric quality analysis and 3D mesh patching.
- Wrote a camera detection handler C++ script for a store robotic camera
- Worked on server migration tasks and re-architecture for a machine learning outfit completion and recommendation application
- Participated in Target's internal hackathon and their internal research and idea development program
- Trained NeRF algorithm with custom 2D dataset and COLMAP image processing on Kubernetes clusters to create 3D assets
- Adapted code for machine learning smoothing algorithms and developed new code to transform and rotate meshes back to their original center
- Developed scripts to make mesh objects manifold and to upsample meshes to a certain level of resolution

Transportation Intern
October 2020 – December 2021

Federal Highway Administration
Montpelier, VT

- Created workflows for financial data using tools like SAP Business Objects, PowerBI, SharePoint, Outlook
- Participated in formal review of business and technical requirements and application design, including Section 508 reviews for accessibility and NEPA/EIS reviews
- Assisted with developing solutions pertaining to community transportation equity
- Developed SQL scripts to query financial databases and presented historical data trends to the team

Web Developer
June 2021-December 2021

Giardina and French
Boston, MA

- Demonstrated knowledge of quality assurance testing methodology relative to Agile methodology
- Worked directly with non-technical users for design, testing and workflow

Student Ambassador
April 2020-December 2021

Northeastern University
Boston, MA

- Guided prospective students in order to answer questions about enrollment
- Spoke at student panels for new students in order to provide a youth perspective
- Engaged with the College of Professional Studies community in order to bring awareness to non-traditional students

Dancer
August 2018-August 2019

State Opera
Plovdiv, Bulgaria

- Worked as a professional ballet dancer for the European Capital of Culture 2019 project
- Conducted arts outreach to the local community

Leadership and Community

Target Women in Data Science   January 2022 - present
Minneapolis, MN

- Mentored students through Target's internal program for underrepresented groups in STEM fields
- Participated in the awards ceremony and facilitated discussion with mentee

Girls Dream Code   December 2022 – present
Minneapolis, MN

- Served as a mentor to high school students at Mounds View High School and facilitated discussions on careers in STEM

Web and Content Developer   August 2021
Fyrefly Yoga   *Plainsboro, NJ*

- Served as a consultant for a fledgling yoga studio's website strategy
- Advised leadership about content strategy and SEO frameworks

United Nations Academic Impact   August 2021-Dec 2021
Millennium Fellow   *Boston, MA*

- Working on a social impact project with the UNAI to create a map of hazardous waste sites in Vermont.
- Using ArcGIS and other technical skills to further Sustainable Development Goals 10 and 11.

Technical Skills and Interests

Languages: C++, Python, HTML, CSS
Libraries :Tensorflow, Keras, PyTorch
Frameworks: Kubernetes, Docker, Vela, Git, Linux, Bash
Cloud/Databases: HQL, SQL, Pyspark
Areas of Interest: Data Science, Machine Learning, 3D Computer Vision, NeRFs
Soft Skills: Problem Solving, Self-learning, Presentation, Adaptability

Awards

Employee Recognition   Federal Highway Administration
April 2021   *Montpelier, VT*

- Recognized for contributing to the delivery of the Compliance Assessment Program