SHUBHAM DESHMUKH

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EDUCATION

Virginia Tech   Aug 2023 – May 2025
Master of Computer Science (GPA: 3.63/4.0)   *Falls Church, VA*
- Relevant Coursework: Intermediate Data Structures and Algorithms, Software Engineering, Web App Development, Usability Engineering, Machine Learning 1, Introduction to Deep Learning.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C++, C#, SQL, HTML, CSS, MATLAB
Frameworks: ReactJS, D3.js, Node.js, .NET, Flask, Django, TensorFlow, Keras, PyTorch, OpenCV
Software & Tools: Visual Studio Code, Eclipse, Azure, AWS, Docker, Tableau, Jupyter Notebook, GIT, R Studio, MATLAB, Spyder, PyCharm, Postman
Expertise: Data Visualization, Machine Learning, Neural Networks, Deep Learning, Computer Vision, Data Pipelines, ASP.NET Core MVC, Visualization, Cloud Computing
Certifications: Fundamentals of Accelerated Computing with CUDA C/C++, Google Data Analytics Certificate, Generative Adversarial Networks (GANs) Specialization, Deep Learning Specialization

EXPERIENCE

Graduate Research Assistant   Aug 2024 – Present
A3 Labs - Commonwealth Cyber Initiative-Hub - Virginia Tech   *Arlington, VA*
- Developed innovative algorithms for Computer Vision research projects, resulting in a 30% increase in system performance while enabling real-time analysis of environmental data for the Biological Systems Engineering Department.
- Designed and executed predictive models using advanced machine learning algorithms on a dataset of over 50,000 water body observations provided by USGS.
- Achieved a 25% increase in forecasting accuracy for regional water management initiatives.

Software Engineer Intern   Jun 2024 – Aug 2024
J. Craig Venter Institute   *Rockville, MD*
- Enhanced user experience by development of interactive data visualization tools for the Human Salivary Proteome (HSP 3.0), enhancing data accessibility for 50+ researchers and improving user engagement by 40% through streamlined interfaces.
- Engineered a comprehensive data analysis pipeline using D3.js, React, HTML, CSS, JavaScript, Python, R, Docker, and AWS Lambda.
- Delivered a 20% reduction in data processing time, enhancing overall research efficiency for a team of 10 analysts.

Software Engineer   May 2022 – June 2023
Wipro Limited   *Pune, India*
- Orchestrated the development of 10+ web applications utilizing the ASP.NET Core Framework, achieving a 100% success rate in meeting project timelines while collaborating closely with cross-functional teams to drive innovation.
- Implemented and administered Tableau Server, streamlining data management processes which led to a 15% reduction in report processing time and enhanced accessibility for over 50 team members across departments.
- Conducted a thorough analysis with the Retail POS team to identify and troubleshoot 42 technical anomalies, culminating in a 10% enhancement in system uptime and increased transaction reliability for end-users.

Project Intern   Aug 2021 – Jan 2022
IFM Engineering Pvt. Ltd.   *Pune, India*
- Executed a Patient Monitoring System Web Application, producing 95.79% prediction accuracy and resulted in a 30% reduction in user-reported issues post-launch.
- Developed a cutting-edge AI solution with Mediapipe and YOLOv4-tiny, facilitating real-time patient assessments; the tool is utilized by over 20 healthcare professionals, improving workflow efficiency in the hospitals.

PUBLICATIONS

Poseanalyser: A Survey on Human Pose Estimation — Springer Nature, Singapore   Jan 2023
- Authored a comprehensive report detailing findings from the review of 50 advanced architectures for Human Pose Estimation, providing actionable insights that improved research understanding and informed future development strategies.
- Implemented a thorough benchmarking comparison process for 6 distinct Computer Vision techniques, identifying the top 2 that reduced computational time by 15% while maintaining a high level of accuracy in human pose detection tasks.