Sonal Shankar Udapudi

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CAREER OVERVIEW

Master's graduate in Computer Science with hands-on experience in data engineering, data quality, and governance. Proficient in SQL, Python, and data visualization, with a proven ability to streamline data pipelines and ensure integrity across systems. Known for clear communication, a collaborative mindset, and a keen eye for detail that supports both technical precision and business alignment. Passionate about building trustworthy data systems that empower decision-making.

EDUCATION

Old Dominion University   August 2023 - May 2025
Master of Science in Computer Science   *Virginia, USA*

Dayanand Sagar Academy of Technology and Management (VTU)   July 2017 - July 2021
Bachelor of Engineering in Computer Science   *Bengaluru, India*

EXPERIENCE

Graduate Research Assistant   September 2024 – January 2025
Old Dominion University Research Foundation   *Norfolk, USA*

- Collaborated with team members to document research findings, showcasing innovative approach to enhance model interpretability and transparency.
- Prepared a review paper that is to be published on the topic involving AI in Cyber Physical Systems.

Associate Professional Software Engineer   August 2021 – August 2023
DXC Technologies   *Bengaluru, India*

- Managed day-to-day support tickets using internal tools (iCAM, CIEDI), triaging issues and coordinating timely resolutions.
- Debugged and updated Java applications; maintained GitHub repositories and optimized SQL queries for reporting.
- Resolved post-production defects through root cause analysis; documented fixes and authored Knowledge Transfer (KT) guides.
- Collaborated with QA, DevOps, and U.S.-based clients on requirements, updates, and production issues.
- Supported production processes: incident analysis, ticket creation, release scheduling; automated builds via Bamboo.

PROJECTS

Sentiment Analysis on News Headlines | RAISE'25 AI Competition, Rutgers Bloustein MPI — March 2025 (Virtual)
- Used Python, TextBlob, and TF-IDF to classify multilingual headlines (10K+ records) and extract sentiment trends.
- Built Tableau dashboards to visualize sentiment patterns over time and across languages.

Enhancing Public School Quality: Strategies and Solutions | Hampton Roads Datathon — October 2024, Norfolk, USA
- Used Python and survey data to perform root cause analysis (Fishbone, 5 Whys) on public school issues.
- Proposed actionable, data-backed improvements and visualized insights for community stakeholders.

Rainfall Prediction Using Big Data (PySpark) | Old Dominion University — July 2024, Norfolk, USA
- Processed 113K+ weather records using PySpark and built ML models (Random Forest, Logistic Regression) in Scikit-learn.
- Achieved 81.2% accuracy and visualized model outputs using Plotly and Matplotlib.

Digital Library Search Engine with Chatbot | Old Dominion University — December 2023, Norfolk, USA
- Built a full-stack ETD search platform using PHP, HTML, PostgreSQL, and Elasticsearch with GPT-based chatbot integration.
- Enabled advanced semantic queries, metadata display, and secure user access features.

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, JavaScript, PHP, HTML/CSS
Databases & Data Tools: PostgreSQL, MySQL, MongoDB, OpenRefine
Frameworks & Libraries: Scikit-Learn, PyTorch, OpenCV, NumPy, Pandas, Matplotlib, Plotly
Cloud & Platforms: AWS, GitHub, MATLAB, Tableau, VS Code
Web & APIs: Elasticsearch, ChatGPT API, HTML/PHP integration
Dev & Workflow: Git, Jupyter Notebook, VS Code
Soft Skills: Technical Writing, Stakeholder Communication, Team Collaboration

LEADERSHIP/EXTRACURRICULAR

- Represented and supported 100+ international students as the Student Representative Leader (Outreach) for Global Student Friendship at ODU (Aug 2024 – May 2025), leading cultural engagement initiatives and acting as a liaison between students and leadership.
- Coordinated campus-wide technical events as an Event Coordinator for the Computer Society of India (Jan – Feb 2019), managing logistics, promoting participation, and encouraging skill development through workshops and competitions.