Atharva Ameya Pore

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A collaborative AI enthusiast skilled in agile methodologies, Python, Machine Learning, Deep Learning, and big data tools, passionate about driving innovation in team environments.

EXPERIENCE

Inter-University Centre for Astronomy and Astrophysics | Software Developer | Pune, IN **December 2019 – June 2023**

- Optimized the cycle time of data analysis and visualization by 48% using Agile Development and rule-based automation techniques, in collaboration with cross-functional teams.
- Achieved a process improvement of 27% by developing an advanced data-driven AI pipeline by implementing Agile Architecture, algorithmic optimizations like Gradient Descent, and vectorized operations & efficient data structures—utilized Solution Modeling for effective design and execution.
- Achieved a 5x improvement by utilizing advanced plot generation to efficiently analyze and visualize thousands of data lines, enhancing visualization based on feature extraction. Led the user and technical manual team with a Customer Focus to easily convey the software, incorporating Global Perspectives.
- Increased image generation efficiency by 65% by building 4 packages for parallel processing of large data, demonstrating Agile Systems Thinking in action.
- Streamlined the pipeline, achieving a 52% reduction in overall processing time and a 47% boost in image generation efficiency through a strategic combination of parallel computing and computational optimization techniques, considering Regulatory Risk Compliance Management for a comprehensive solution.

EDUCATION

- Master of Sciences in Artificial Intelligence | University of Michigan - Dearborn | GPA: 4.0 **August 2023 – May 2025**
  Relevant Courses: Robot Vision | Design Analysis of Algorithms | AI | Software Engineering
- Bachelor of Engineering in Computer Science | Savitribai Phule Pune University | GPA: 3.22. **June 2014 – June 2018**

PROJECTS

Advanced Video Foreground Extraction | Python, Computer Vision

- Implemented background subtraction methods, GMG, MOG2, KNN, and MOG in OpenCV to analyze over 15,000 video frames, achieving an impressive accuracy of 92% across various video sources. Demonstrated Agile Development principles in methodology selection and implementation, considering Global Perspectives for diverse video sources.

Shi-Tomasi and Harris – Precision Corner Detection | Python Computer

- Implemented Harris Corner Detection with 88% accuracy and developed a Python code for Shi-Tomasi with 90% accuracy, efficiently processing more than 5,000 images for robust corner detection across diverse scenarios. Applied Agile Systems Thinking to optimize algorithms and enhance accuracy.

Haar-Cascade Face and Eye Detection Suite | Python, Computer Vision, Deep Learning, CNN

- Utilizing Agile Architecture, I achieved 90% accuracy for face & 85% for eye detection by building a Haar Cascade detector, incorporating Deep Learning for classification across diverse images, and ensuring Regulatory Risk Compliance Management for data privacy considerations.

Road Sight Navigator – Lane Line Detection | Python, Machine Learning, Image Processing, CNN

- Employing Agile Development methodologies with a strong Customer Focus on user experience, I leveled up lane detection with Python and CNN, achieving 95% accuracy across 10,000+ frames under varied conditions, streamlined processing by 30%, and built a user-friendly interface, boosting user efficiency by 40%.

SKILLS

Python, Robot Vision, Computer Vision, Data Cleaning, Data Visualization, Data Modeling, Data Analysis, C++, SQL, R, PyTorch, Keras, Natural Language Processing, NLTK, Matplotlib, Seaborn, Plotly, Data Structures & Algorithms, SQL, Agile Development Methodologies, Agile Architecture, Solution Modeling, Solution Functional Fit Analysis, Customer Focus, Global Perspectives

CERTIFICATIONS

PCEP Certified Python Programmer | Python Institute **Completion Month: February 2022**
Real-Time Rendering (Certificate Course) | AstroMediComp | Grade: 9.6/10 **October 2018 — March 2020**

PUBLICATIONS

Title: AstroSat science support cell **Published Year:** October 2021
Publication: Journal of Astrophysics and Astronomy, Volume 42, Issue 2, article id.28 | **Authors:** Roy, J.;...; Pore, A.
Title: Interactive Projection Using 3D Gesture Recognition **Published Year:** May 2018
Publication: International Journal of Scientific and Engineering Research, Volume 9, Issue 5 | **Authors:** Paranjape C.;...; Pore A.