Dipin Kunhambu Nair

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Summary

Software developer with 6+ years of experience in Python and C++ specializing in simulation software and automation. Core contributor to Ansys Mechanical software development and PyMechanical maintainer. Strong mathematical background with expertise in robotics, AI, and DevOps workflows. Proven track record in building scalable engineering tools and modern software practices.

Education

University of Cincinnati **January 2021 – August 2023**
Masters of Science in Mechanical Engineering | GPA: 4.0/4.0 *Cincinnati, OH*

Indian Institute of Technology, Hyderabad **August 2012 – August 2016**
Bachelor of Technology in Mechanical Engineering | GPA: 8.24/10 *Hyderabad, India*

Skills

Programming: C/C++, Python, JavaScript, HTML, CSS, MATLAB, XML, SQL, LaTeX
Tools: Visual Studio, VS Code, Git, Microsoft Azure, Linux, GitHub, Bitbucket, Sphinx, CI/CD, Jupyter Notebook, ROS, Gazebo, Simulink
CAE: Ansys, Abaqus, SimLab, Hypermesh, UG NX
Soft Skills: Problem-solving, Teamwork, Communication, Leadership, Critical thinking

Professional Experience

Ansys Inc. **January 2023 – Present**
R&D Engineer II *Austin, Texas*

- Developed PyAnsys Open Source Libraries and supported production of Ansys Mechanical
- Conducted Scrum meetings for PyMechanical Python package
- Interacted with customers and assisted them in integrating PyAnsys packages to their workflow
- Worked with Linear Dynamics team for adding new release features for ANSYS Mechanical Software
- Made major contributions to code-base after ensuring code quality through Windows and Linux developer builds through Microsoft Azure and ARM test
- Demonstrated expertise in applying Microsoft Component Object Model (COM) principles
- Worked closely with the test team to identify bugs and created Technical Documentation for beta and release features
- Participated in Scrum meetings to update project progress and challenges

General Motors **September 2016 – December 2020**
Senior Engineer *Bangalore, India*

- Earned Design for Six Sigma Black Belt by supervising 2 projects as team leader and facilitator
- Coordinated on adding 12 different efficiency modules in MASTA leveraging C++
- Led a cross-functional team of 4 to automate meshing in SimLab software using JavaScript for simulation analysis
- Automated Abaqus system modeling with VBA scripting and reduced 85% of man hours
- Executed projects in Transmissions (Manual, Automatic, EV & Hybrid) and attended Engine tear-downs
- Earned 7 recognitions including Work of Wonder and Pat on the back for Transmission efficiency Optimization

Projects

Classification of Rice using Soft Computing AI Techniques | *Python, MATLAB* **June 2022**

- Constructed a Genetic Fuzzy Cascading system to classify 2 Rice varieties and presented research at NAFIPS conference
- Analyzed methodology on 80% of 3810 data sets. Obtained Accuracy of 94.36% in validation set
- Proposed method produced more accuracy than Linear regression, SVM, Multi-Layer Perceptron, and Decision Tree

Real-time Path Planning using Dijkstra and A* Algorithm | *Python* **April 2022**

- Devised a 2D rapidly changing environment and accomplished path planning avoiding moving obstacles
- Collaborated with 2 other students to implement Dijkstra and A* algorithm using Python Object Oriented Programming