

Som Wakdikar

[linkedin.com/in/somwakdikar](https://www.linkedin.com/in/somwakdikar) | somwakdikar@gmail.com | somwakdikar.github.io

EXPERIENCE

DevSecOps + Embedded Software Engineer @ Lockheed Martin

June 2024 – Current

- Founded and integrated **CI/CD** pipeline infrastructure across Gitlab with **Python** for 80+ engineers across 10+ agile teams to automate code compilation, reviews, and unit testing
- Led **all** technical Agile team demos highlighting CI/CD infrastructure and new features to generate 400+ header files for cross-process communication
- Supporting build infrastructures and other software Agile teams by containerizing software and dependencies using **Docker/Podman** for a complete F-35 mission software build
- **Embedded** software development in **Object Oriented C++** for the next-gen F-16 using Agile methodologies
- Built tools using **Bash** and **Python** to generate 100+ files and integrating tools such as Clang LLVM, GDB, CMake, Make, and g++ to speed up repetitive code development and code reviews by 33%

Software Engineer @ NASA

Jan 2023 – Aug 2023

- Deployed an unconventional solution to provide the flight control team a real-time video feed from the Boeing Starliner sensor suite using **Python** and computer vision, earning an award for outstanding contributions
- Developed a **Python MediaWiki** extension in headless Linux interfacing with PHP and a SQL database so an astronaut can access the Artemis II ITAR compliant training
- Rectified discrepancies for computed telemetry data and flight displays through detailed analysis and debugging of Python3 code, the deployment architecture in Linux, and other proprietary GUI code
- Pioneered a **React + Node.js** web app for new hire trainings and a **Unity VR** experience used for ISS astronaut trainings

Nano-electronic Software Researcher @ University of Texas

August 2023 – May 2024

- Developed a FOSS simulation to model nano-electronic devices in **Julia (Backend)** and **React (Frontend)**
- Researched and implemented high performance matrix inversion routines in **Julia**, reducing Big-O complexity and enabling inversion of structured 1M x 1M+ dimensional matrices
- Refactored codebase with Object Oriented programming techniques, implemented CI pipelines using GitHub Actions

Propulsion Team Leader @ University of Texas

Aug 2021 – Jan 2023

- Led the Design, Build, Fly team that placed top 10th to optimize the propulsion system using data analysis
- Singlehandedly engineered an urgent solution to the aircraft deployment system after design plans had failed

Civil Engineering Researcher @ TAMS

Dec 2020 – Aug 2021

- Stress/strain analysis of shear walls using Abaqus FEA; modeled a 155-unit apartment using Autodesk Revit

EDUCATION

B.S. Electrical & Computer Engineering, The University of Texas at Austin, Austin TX

Aug 2021 – May 2024

- GPA: 4.0/4.0, graduated early in 2 years with High Honors
- Technical Core/Focus in Software Engineering and Design + Computer Architecture and Embedded Systems

Honors Diploma, TAMS, Denton TX

Aug 2019 – May 2021

- GPA: 4.0/4.0, Early college residential program for high-school students
- Awarded for exceptional academic performance and completing 475 community service hours

SKILLS

- Python, Linux/Unix, C/C++, Bash/Shell, CI/CD DevOps with GitHub/GitLab, Java, SQL/NoSQL, Containerization with Docker/Podman, Julia, Perl, JavaScript, React.js, OOD/OOP, Full-stack, Node.js, Agile Scrum/Kanban

PROJECTS

- [Fine-tuning an LLM](#): Successfully achieved a **higher accuracy than GPT 3.5 Turbo** on logical reasoning datasets
- Hardware Checkout: Used React, MongoDB, Heroku, Flask, and JavaScript to create a full-stack web application
- [Kaggle Competition](#): **Ranked 2nd/104** in AI/ML Data Science course competition for binary classification
- Weather Application: Java, Android Studio, Google APIs, Weka and tested on an android smartphone
- Embedded Systems (2x): Communication between two devices using RF technology; engineered a video game
- Earthquake Damage Prediction: Python machine learning models to predict building damage after an earthquake