

Daivik Karbhari

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[Portfolio and Blogs](#)

EXPERIENCE

GOOGLE SUMMER OF CODE, 2024

SOFTWARE DEVELOPER

May 2024 – Aug 2024 | Remote

- Built a Python package for the Python Software Foundation (Seldon-Code) to streamline simulations of Opinion Dynamics Models.
- Engineered Python bindings using Pybind11 for a high-performance C++ simulation engine, optimizing the cross-language workflow.
- Created detailed documentation and API references to enhance user understanding and engagement within the open-source community.
- Successfully published the package to the Python Packaging Index (PyPI), facilitating easy access and distribution.
- [Completion Certificate](#)

PROJECTS

PYSELDONLIB FOR OPINION DYNAMICS SIMULATION

- Developed a Python package for simulating opinion dynamics, leveraging **Pybind11** to bind C++ code to Python.
- Tackled the challenge of working with **templated classes** in C++ to ensure correct usage and seamless integration in Python.
- Applied **Object-Oriented Programming (OOP)** principles and modular programming to design Python model classes and a network class, providing a clean API for interacting with simulation networks.
- Authored comprehensive documentation, including detailed visualizations for the **Classical DeGroot Model** to enhance understanding of opinion dynamics.
- Implemented a **CI/CD pipeline** for generating Python wheels for multiple platforms, including **Linux**, **macOS**, and **Windows**.
- Technologies used: **C++**, **Python**, **Pybind11**, **Sphinx** (for documentation), **Meson** (for build automation), **Micromamba** (for environment management), **GitHub Actions** (for CI), **Cytoscape** (for Network Simulation).
- **Links:**
[Documentation](#) | [Github Repository](#) | [PyPI](#)

Next App for client side rendering of Meteorological Data (precipitation) with visualizations

Travel Preference Form Using HTML, CSS, JS and SQLite DB

PYPI Python Package-WhatsapLinkGen

SKILLS

Programming: C++ • Python • C • Java • SQL

Development: HTML • CSS • JavaScript • React.js • Next.js • MongoDB • SQLite • Node.js • NPM • React Native

Technology: Git/Github • Linux (Parrot OS) • Windows • Pybind11 • Meson • Micromamba • Sphinx • GitHub Actions • Docker • Cytoscape • Bash

EDUCATION

WALCHAND COLLEGE OF ENGINEERING

B.TECH COMPUTER SCIENCE AND ENGINEERING

Expected June 2026 | Sangli, Maharashtra

Cumm. GPA: 8.57 / 10.0

THOMAS BAPTISTA JUNIOR COLLEGE

HSC | 2021 | Vasai, Maharashtra

Percentage: 95.83%

COURSEWORK

UNDERGRADUATE

CORE SUBJECTS:

Data Structures and Algorithms • Operating Systems • Database Management System (DBMS) • Computer Networks • Compiler Design • Software Engineering • Computer Architecture • Introduction to Probability and Statistics • Artificial Intelligence

CERTIFICATION

JavaScript Data Structures and Algorithm Certification

AWARDS

- Reliance Foundation Undergraduate Scholarship
- Counselling Prize - Maharashtra Talent Search Examination

ACHIEVEMENTS

- Finalist at IIT Madras Policy Proposal
- Underwent Cadet Training at Sea Cadet Corps
 Key Skills Acquired:
 Leadership • Teamwork • Physical Fitness • Navigation and Seamanship • Crisis Management • Communication • Discipline