Rithvik Uppala

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github.com/RithvikU

Education

Arizona State University – *B.S* in Computer Science   *Graduating May 2027*

- GPA: 3.92/4.0
- **Coursework:** Object-Oriented Programming, Digital Design Fundamentals, Logic in Computer Science, Computer Organization/Assembly Line Programming, Data Structures and Algorithms, Introduction to Software Engineering, Web Design and Development, Database Management

Research/Projects

U.S. Wind Energy Capacity Forecasting Model – *Arizona State University*   *Aug. 2025 - Present*

- Built a Python-based predictive model using the U.S. Wind Turbine Database to forecast U.S. onshore and offshore wind capacity through 2050, modeling turbine additions and retirements.
- Integrated turbine-level data with policy, technology, cost, and resource constraints to run time-series forecasts and scenario analyses, with results exported to Excel dashboards for renewable energy planning.
- Tools: Python, SQL, Machine-Learning

Real Time Services Capacity Sensor & Alert System – *Arizona State University*   *Aug 2025 - Present*

- Built a hotel-style digital check-in system to manage bed availability and guest occupancy in homeless shelters.
- Developed a Python desktop app (PyQt5/Tkinter) linked to a PostgreSQL database for real-time room and bed tracking.
- Implemented cloud synchronization to share capacity data across multiple shelters and streamline staff operations.
- Optimized backend logic for scalability, reliability, and ease of deployment in nonprofit environments.
- Tools: Python, PyQt5/Tkinter, PostgreSQL, Cloud Integration, System Design & Deployment

Certifications

Fundamentals and Procedural Programming in Python – *Georgia Tech*   *Jun. 2023*

- Demonstrated proficiency in Python fundamentals, including variables, data types, and operators.
- Applied procedural programming techniques to develop and debug structured code.

Web Development with HTML5, CSS3, and JavaScript – *IBM*   *Dec. 2024*

- Designed and structured responsive web pages using HTML and CSS and JS for the interactive features
- Analyzed the web development lifecycle and differentiated between front-end, back-end, and full stack roles
- Utilized modern developer tools and IDEs to build and debug web applications

Junior Software Developer Certificate – *Amazon*   *Jul. 2025 – Oct. 2025*

- Built desktop applications with integrated data handling and GUI features
- Applied software development principles to solve realistic coding challenges
- Developed a portfolio-ready project demonstrating technical and problem-solving skills

Technologies

Languages: Java, Python, JavaScript, HTML, CSS, C, C++, MatLab

Frameworks & Libraries: PyQt5, Tkinter, React, Flask, Express.js, NumPy, Pandas, Matplotlib

Databases & Cloud: PostgreSQL, Firebase, MySQL, Google Cloud Platform (GCP)