Bed Pandey

West Palm Beach, FL
Student at the University of Central Florida

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github.com/panbed GitHub
bedp.dev Portfolio

Education

•University of Central Florida *August 2022 - May 2026 (Expected)*
GPA: 3.94 Orlando, FL
Bachelor of Science in Computer Science

•Suncoast Community High School *August 2018 - May 2022*
ACT: 29 | GPA: 3.75 Riviera Beach, FL
Computer Science Magnet Program

Work Experience

•South Florida Water Management District *May 2025 - August 2025*
Data Analyst West Palm Beach, FL

- Created a Python GUI (LZ40 Calculator) to calculate evapotranspiration from USGS input data, helping alleviate tedious work done in Excel before. Also includes functions to transform breakpoint data into daily data, as well as query DBHydro to get daily lake stage data.
- Developed two pump station related programs: Monthly Pumped, which calculates amount pumped in acre-ft, and Pump Daily Runtime, which calculates hours pumped by a pump station daily. Replaces old, non-functional Wolfram Mathematica versions of each program.
- Created the Timeseries Plotter, a tool to plot large amounts of timeseries data in 10-day intervals within Excel, saving time as opposed to manually graphing multiple data ranges within Excel. Includes functions to properly synchronize all axes in a graph for easier-to-understand graphs.
- Used tools such as DBHydro, DAS, iMaps and ArcGIS to gather information on various stations.

•Center for Distributed Learning *May 2024 - Current*
Web Developer University of Central Florida, Orlando, FL

- Contributing to UDOIT, an open-source, all-in-one accessibility scanner for Canvas developed and used by UCF for all courses. Implemented new functionality to use IBM's Equal Access page scanner using AWS Lambda to speed up scanning process, ensuring that reports generated from Equal Access are compatible with the existing MySQL database, and creating new forms in React to fix accessibility issues.
- Creating Terraform scripts to provision various services in AWS so universities can set up a UDOIT instance easily with minimal command-line knowledge. Also creating a full-stack web application (Express/React) to provide easier installation steps that traditionally requires command-line knowledge.
- Feasibility testing different frameworks, such as creating an Electron application that uses OAuth and Instructure's Canvas API and testing several Node modules such as IBM's Equal Access and comparing results against other accessibility scanners.
- Collaborating with faculty and professors on course development tickets using ServiceNow. Tasks include creating and updating HTML pages for courses, ensuring courses are accessible and WCAG 2.1 compliant, and speaking with professors on ideas they want implemented in their course and how to implement them.
- Updating various WordPress-based sites for UCF to be more accessible and WCAG 2.1 compliant.

Projects

•Overcastly (React, TypeScript, Node.js, Express, Tailwind, MongoDB) *October 2024 - December 2024*

- MERN-based social media app focused on weather and storm tracking.
- Main features include a map view displaying post locations and radar layers from NOAA, a social page displaying posts in a card view, and a dashboard for quick information on recent posts and weather information for your location.
- Created the web app for Overcastly. Contributed to APIs created in Express, managed Digital Ocean hosting and database infrastructure in MongoDB.

•Graphical-GOES (Python, Matplotlib, JavaScript, jQuery, HTML, and CSS) *December 2022 - Current*

– Developed interactive web front-end to process raw satellite data from NOAA satellites into high-quality images.
– Designed front-end interface using CSS, and developed user-interactivity with JavaScript and jQuery.
– Created sleek menu and toolbar system to allow for smooth scrubbing and video playback of satellite images and changing satellite options, such as location and band.
– Contributed to development of back-end scripts written in Python, using Matplotlib to process raw data files from NOAA AWS servers.

•**Contact Manager** (JavaScript, PHP, HTML, CSS/Bootstrap, MySQL) *October 2024*

– LAMP-based contact manager app created for Processes of Objected Oriented Development.
– Acted as project manager for a group of four, creating Gantt charts, hosting weekly meetings and creating a presentation for the app.
– Created a mobile-friendly front-end with JavaScript and Bootstrap.
– Contributed to multiple API endpoints written in PHP to perform CRUD operations in the database.
– Containerized the app into two parts (a web container hosting the website and API, and a database container with MySQL) with Docker Compose for easier development across platforms.

•**youtube-fxdownloader** (Java) *July 2023 - December 2023*

– Utility to download videos from YouTube and other media sharing websites, providing a full user interface for the yt-dlp project.
– User interface created with JavaFX, with automatic preview of thumbnail content and video information using the YouTube API.
– Used the Maven build tool to manage dependencies.

•**boothsmultiply** (C) *March 2023*

– Implemented Booth's multiplication algorithm in the C programming language.
– Designed a visual representation of the algorithm, including intermediate steps when performing Booth's multiplication algorithm, including binary data, the carry bit, and final result after multiplying in both binary and decimal representation.

•**prgrid** (Node.js, JavaScript, jQuery, Jade/Pug, and CSS) *February 2023 - Current*

– Designed an interactive web front-end to play musical notes on a piano roll grid, allowing the user to change waveforms to create retro sounds and patterns.
– Utilized Node.js as a back-end and Pug to create cleaner HTML code.
– Used CSS to create a clean and simple user interface that anyone can recognize and use.
– Created scripts that uses JavaScript's Web Audio API to generate sounds with synthesizers.

Clubs and Positions of Responsibility

•**Wiki Knights** *Jan 2023-Current*

President, Contributor Orlando, FL

– President of Wiki Knights, a club dedicated to promoting the use of open educational resources in the classroom.
– Wrote articles for the Introduction to C Programming textbook, a textbook created by members of Wiki Knights and used by professors in classes.
– Created shell script to find all recently modified *.md files and determine if their *.html counterpart has also been rebuilt. Used as part of broader shift to utilize Docker for the build script for the Wiki Knights Computer Science Materials.
– Hosted a live session explaining how to set up a development environment with GitHub, Visual Studio Code and Docker so that students can easily create and modify articles for the Wiki Knights library.
– Tabled at events to promote the use of open educational resources to faculty, professors and students.
– Created and edited social media videos in order to create engaging content about open educational resources.
– Worked with UCF Student Government to pass legislation promoting the use of open educational resources, and working with faculty and students for input.

Technical Skills and Interests

Languages: C, C++, C#, Java, Python, PHP, SQL, JavaScript, HTML, R, CSS, Bash/Shell scripting
Tools: Linux, Git, Docker, WordPress, Visual Studio, ServiceNow
Frameworks: React, jQuery, Node.js, JavaFX
Relevant Coursework: Data Structures and Algorithms I/II, Intro to C Programming, Object-Oriented Programming, Calculus I/II, Linear Algebra, Discrete Math, Statistics I/II