Prasanga Tiwari

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SUMMARY

Final-semester CS student with strong back-end skills (Django, Redis, PostgreSQL), experienced in building web apps (auth, messaging, REST APIs, real-time connections). Skilled with Python data processing and seeking an entry-level SWE/Developer role.

Education

Hunter College New York, NY

B.A. in Computer Science, Minor in Mathematics *Anticipated Graduation: June 2025*

Relevant Coursework: Full Stack Web Development, Database Systems, Operating Systems, Software Analysis and Design, Intro to Data Science, Game Design

Technical Skills

Languages: Python, C++, SQL (Postgres), JavaScript, HTML/CSS
Frameworks/Technologies: Django, React, WebSockets, Redis, PostgreSQL
Libraries: Pandas, NumPy, Matplotlib, Scikit-learn

Projects

Open Mouth Words | *Django, Python, WebSocket, Redis, Git*

- Developed a full-stack web application using Django, featuring real-time WebSocket communication and group chat functionality.
- Built an Omegle-style platform to connect language learners for conversational practice.
- Utilized PostgreSQL for relational data management and Redis for efficient channel layer handling.
- Hosted on Render; migrating the platform to AWS for improved scalability and reliability.

Simple 2D Game Engine | *C++, OpenGL, GLFW, GLAD*

- Implemented a custom 2D game engine with C++ and OpenGL, integrating GLFW, GLAD, and stb_image.
- Managed cross-platform build configuration using CMake; leveraged Bridge/Singleton patterns for modularity.
- Demonstrated engine capability by recreating a basic version of Pong.

Sudoku Solver | *C++*

- Developed a C++ backtracking algorithm to solve Sudoku puzzles, using 2D arrays for puzzle representation.
- Ensured robust memory management and safe allocation/deallocation practices.

Traffic Light Controller Model Checking | *NuSMV*

- Modeled a multi-lane intersection with pedestrian signals, detecting concurrency issues (e.g., starvation, fairness).
- Specified LTL/CTL properties to verify safety constraints; identified counterexamples and proposed solutions.
- Documented verification approach, property definitions, and outcomes for future refinement.

Experience

Coding Instructor Oct 2023 – Present

Engineering For Kids *Queens, NY*

- Teach elementary students programming fundamentals (Scratch), guiding them through creative projects.
- Troubleshoot hardware/software issues and provide technical support to students and faculty.

AP Computer Science Tutor Jan 2023 – Apr 2023

Private Tutoring *Queens, NY*

- Reinforced OOP concepts (polymorphism, inheritance) for a high school AP Computer Science student.
- Introduced version control (Git) to prepare the student for collaborative software development.

Additional Activities

Mentee Sep 2022 – Nov 2022

Yext Mentorship Program *Queens, NY*

- Solved 30 LeetCode medium-level problems, improving algorithmic thinking and interview readiness.
- Gained industry insights from experienced mentors; refined coding style and problem-solving approach.