Bahulya Tandon

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EDUCATION

University of Wisconsin - Madison   **Expected Graduation - May 2025**
Bachelor of Science: Computer Science, Information Science   *Madison, WI*
- Certificate in Digital Studies and Game Design
- **3.99/4.0 GPA**; **Dean's List** - Fall 2021, Spring 2022, Fall 2022, Spring 2022, Fall 2023, Spring 2023, Fall 2024

WORK EXPERIENCE

Hex Business Innovations   **Jun. 2023 – Jul. 2023**
Web Development Intern   *Haryana, India*
- Designed a website in a development team of 4 for **LawCrux India**, used by over **100+ client companies**.
  - Used **JavaScript**, **React.js**, and **php** to create, design and optimize the UI/UX features of websites.
- Designed **Custom Components** and **Custom Hooks** to be used in the company's applications.
- Utilized many React libraries ranging from **Date** and **Time Pickers** to **Webcam** and **Stripe** to create utilities as well as libraries like **Material UI, Bootstrap and ApexCharts** for designing the UI of web pages.
- Data input and manipulation of the backend SQL tables through Axios API queries.

Wisconsin Union Directorate: Games   **Oct. 2021 – May 2024**
Director (Previously Associate Director of General Events)   *Madison, WI*
- Managed a budget of $16,500 for student led programming and organizing regular events for **75+ attendees**.
- Hired, onboarded, organized as well as lead a team of paid workers in a professional environment, using strong interpersonal communication skills to collaborate with other organizations.

SKILLS

- **Languages and Frameworks:** Python, C, C++, Java, JavaScript, Three.js, React.js, HTML/CSS, WebGL, SQL
- **Coursework:** Data Structures & Algorithms, Operating Systems, Graphics, Web Design, Human Computer Interaction, Database Management Systems

PROJECTS

- **Web AR Application** | PBS Wisconsin   **Sep. 2024 – Dec. 2024**
  - Designed and developed a web-based AR application using **Javascript** and **MindAR**, leveraging image and face tracking to deliver an immersive AR experience to users
  - Implemented interactive animated 3D models, audio, video, and text elements together to create an engaging experience
  - Maintained Scrum and Agile principles on a development team of 4 as the Product Manager and a Software Engineer
- **Fictional 3D World Simulation** | *Graphics*
  - Designed an animated 3D project in the **Three.js** framework filled with custom 3D objects with complex geometries
  - Used **OpenGL** to write shaders to give further depth to the complex objects
- **Concurrent Key-Value Store Server** | *Operating Systems*
  - Implemented multithreaded server and client processes that use a shared memory region for inter-process communication in **C**
  - Created a thread safe **Ring Buffer** to facilitate communication between the client and the server
  - Created a concurrent **Hashtable** (KV Store) with atomic operations for the implementation to be faster than Coarse-Grained Locking