MICHAEL BAREN

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EDUCATION

Purdue University | *Bachelor of Science in Computer Science, Minor in Mathematics* **August 2021 – May 2025**

- **GPA:** 3.9 in major / 3.82 overall.
- **Achievements:** Honors College, Dean's List, Athletic Director's Honor Roll, All B1G 10 Academic team.
- **Coursework:** Object-Oriented Programming, Systems Programming, Intelligence, Networking, Operating and Embedded Systems, Graphics, Numerical Methods in Computing, Algorithms.

PROFESSIONAL EXPERIENCE

HirexHire | *Software Developer* **May 2023 – Present**

- Researched, built and tested a new Applicant Tracking System with a focus on scalable, full-stack design.
- Developed secure procedures for data retrieval and manipulation from a convex database while integrating robust API endpoints using Node.js.
- Elevated user navigation and experience by designing a responsive UI that aligns with modern frontend architecture principles
- Engineered a custom API for file uploading and streaming to generate job descriptions with OpenAI, accelerating workflow efficiency by nearly 60%.
- Streamlined job description editing by building a WYSIWYG text editor, equipped with syntax highlighting, formatting, and auto complete using the react library notion.
- Optimized the sourcing of prime candidates by implementing a resume parser that feeds the results into an AI-enhanced search engine.

PROJECTS

Live Streaming System | *Network perfomance analyzer in python with the pyshark library* **February 2025 – April 2025**

- Created server and client containers with docker to isolate network activity while livestreaming.
- Simulated real world traffic by manipulating packet loss rate, bandwidth limitations, and delay within the containers.
- Analyzed the effect of different congestion control algorithms by measuring birate over time, FPs, and throughput.
- Collected real world data from various campus locations by deploying the server to a google cloud VM.

Tile Match Game | *2048 imitation in Java with the swing UI library* **March 2024 – May 2024**

- Server-side code facilitates multiple open connections and maintains a global high score.
- Maintained a global high score among multiple open connections on the server.
- Implemented undo/redo actions using a turn history on the client.
- Enhanced visual appeal by animating the tiles as they slide.

Custom Shell | *Bash imitation written in C* **September 2023 – December 2023**

- Wrote a formal grammar which was converted into a parser using YACC.
- Extended command capabilities by implementing piping, forking, wildcards, and other shell operators.
- Added interupt handling to cancel commands and kill child and zombie processes.
- Improved usage by developing a dynamic command history and functionality for editing commands

LEADERSHIP AND EXTRA CURRICULARS

NCAA Division 1 Athlete | *Cheerleading* **August 2021 – May 2025**

- Represented Purdue year-round at national competitions, football games, men's and women's basketball games, women's volleyball games, high school clinics, and other community events.
- Managed 20+ hours/week training and competition while maintaining a 3.82 GPA.
- Developed strong leadership, time management, and team collaboration skills.
- Served as a peer mentor for first-year student athletes.
- **Awards and Honors**: Voted MVP by teammates at the Universal Cheerleading Association National Competition 2022 – 2023 season, All B1G 10 First Team 2024-2025 season, All B1G 10 Second Team and B1G 10 First Year Only Team 2021-2022 season.

TECHNICAL SKILLS

- **Programming Languages:** Java, Javascript, Typescript, C/C++, Python, HTML, CSS, Matlab, SQL
- **Libraries/Frameworks:** Swing, React, Next.js, react-hook-form, NumPy, PyTorch, pandas, pyshark, Convex
- **Other Tools/Environments:** Git, Docker, Node.js, VS Code, Linux, Xinu (OS for embedded systems), APIs