Roman Boparai

Senior Software Engineer | Backend & Systems Architect
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SUMMARY

High-impact **Senior Software Engineer** with **8 years** of experience architecting scalable systems for Enterprise and AAA Gaming sectors. Proven track record of bridging the gap between high-performance engineering **(C++, UI Architecture)** and modern cloud architecture (Python, Azure, Node.js). Successfully shipped 3 AAA titles (WWE 2K) and led the digital transformation of logistics workflows for a high-growth e-commerce brand.

TECHNICAL SKILLS

- **Languages:** C++, Python, C# / .NET Core, SQL, JavaScript/TypeScript (Node.js), Java.

- **Cloud & Backend:** Azure Functions (Serverless), AWS (S3/Lambda), REST APIs, Microservices, Flask, Braintree API.

- **DevOps & Tools:** Docker, CI/CD Pipelines, Git, Perforce (P4V), Unity 3D, Unreal Engine 5.

- **Core Competencies:** System Architecture, Performance Profiling, Agile/Scrum Leadership, Technical Mentorship.

EXPERIENCE

CARL'S PLACE - Milton, WI
Lead Software Engineer - *Jan 2025 – Jan 2026*

- **Dynamic Product Configurator (Node.js):** Architected and built the backend logic for a complex custom-order engine from scratch. Handled complex state management and validation rules, delivering a critical revenue-generating tool in under 6 months.

- **Internal Tools Platform (Python/Azure):** Engineered the core backend for the company's internal tools portal and deployed serverless Slack bots using **Azure Functions**. Integrated the **Braintree API** to streamline payment data visibility for internal teams.

- **Strategic Leadership:** Transformed the development culture by introducing formal SDLC processes, CI/CD pipelines, and rigorous code review standards to ensure long-term system stability.

LOST BOYS INTERACTIVE - Madison, WI (Remote)
Software Engineer - *Oct 2021 – Sep 2024*

- **Data-Driven UI Systems (C++):** Engineered the core UI architecture for the **MyFaction** live-service mode across three AAA titles (**WWE 2K22, 2K23, 2K24**). Implemented complex C++ widget logic and data binding systems to efficiently display real-time economy data to millions of players.

- **Data Pipelines (Python/SQL):** Developed Python-based ETL pipelines to ingest and validate massive gameplay datasets, ensuring accurate synchronization between backend economy data and frontend visual assets.

- **Feature Ownership:** Owned the end-to-end implementation of the "Post-Match" reward system, coordinating cross-functional requirements between Design, Art, and Engineering teams.

INDEPENDENT GAME DEVELOPER - Janesville, WI
Freelance Software Engineer - *Jan 2020 – Oct 2021*

- **Full-Stack Development (C#/Unity):** Architected and prototyped core gameplay systems for independent titles, focusing on modular code design and performance optimization in the Unity engine.

- **Technical Skill Expansion:** Mastered modern C# design patterns and real-time physics simulations, directly preparing for the transition into AAA development at Lost Boys Interactive.

EXTREME ENGINEERING SOLUTIONS - Verona, WI
Software Developer - *Feb 2018 – May 2019*

- **Hybrid System Architecture (Python/C#):** Engineered a Python backend to process and stage critical data for embedded computing systems, serving a **C#/.NET** frontend for internal operators.

- **Manufacturing Automation:** Developed command-line tools to automate manufacturing tests, significantly reducing manual verification time for hardware units.

UNIVERSITY OF WISCONSIN-WHITEWATER - Whitewater, WI
Research Assistant (Office of Naval Research) - *Sep 2016 – Feb 2018*

- **AI Simulation:** Led a team developing "Inverse Reinforcement Learning" models to simulate human decision-making in naval combat scenarios.

- **Data Engineering:** Wrote custom **Python** scripts to clean and format simulation data for machine learning training sets.

BEST BUY - Madison, WI
Sales Associate - *Aug 2015 – May 2016*

- **Technical Consultation:** Advised customers in the computer and mobile departments, translating user needs into technical hardware solutions.

- **Communication:** Explained complex product specifications in accessible terms, consistently meeting department sales targets through effective problem-solving.

EDUCATION

UNIVERSITY OF WISCONSIN-WHITEWATER – Whitewater, WI
Master of Science in Computer Science – *Jan 2018 – Dec 2019*

UNIVERSITY OF WISCONSIN-WHITEWATER – Whitewater, WI
Bachelor of Science in Computer Science – *Sep 2015 – Dec 2017*

PUBLICATIONS

- **"A Contextual Decision-Making Framework"** – *Computational Context: The Value, Theory and Application of Context in AI* (2018)

- **"Analysis of a Computational Framework to Capture Commanders' Decision Making Processes"** – *SPIE C3I Technologies for Defense & Security* (2018)

- **"Capturing a Commander's Decision Making Style"** – *SPIE C3I Technologies for Defense & Security* (2017)

    - *Note: Published under legal name Ramnjit S. Boparai.*