Jassidak Singh

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EDUCATION

University of Alberta — Edmonton, AB
Bachelor of Science in Computer Science — *Sept 2021 – Jun 2025*

- Relevant Coursework: Software Development, Artificial Intelligence, Reinforcement Learning, UI/UX Design, Data Structures & Algorithms, Machine Learning, Android App Development, and Assembly Language

EXPERIENCE

Product Owner & Full Stack Developer — Jan 2025 – Apr 2025
Fluenty — *Edmonton, AB*

- Led the development of a real-time web platform that connected native Canadian English instructors with over 10,000 Brazilian students to enhance English education through live interaction.
- Designed AI-driven recommendation systems for personalized learning and live progress tracking, resulting in 40% higher student engagement.
- Added secure video calls and live chat to support real-time classes and feedback, making it easier to schedule sessions and improving attendance by 25%.

Machine Learning Researcher — Jan 2025 – Apr 2025
University of Alberta — *Edmonton, AB*

- Built streaming and batch reinforcement learning agents using Stream-Q and tested them on T-maze environments; eLSTM-RTRL agents converged up to 40% faster than BPTT in long-horizon tasks.
- Implemented and compared eLSTM and RTU models on the Copy Task, achieving over 95% accuracy with eLSTM and showing better memory retention than RTU.
- Used Real-Time Recurrent Learning (RTRL) for fully online training, allowing RL agents to learn in partially observable environments without replay buffers and improving learning efficiency.

Software Engineer — Sept 2024 – Dec 2024
Singh Enterprises — *Remote*

- Engineered an e-commerce website to digitize the retail store's operations and increased online sales by 20% through improved product management and intuitive user flows.
- Integrated secure authentication and payment systems using the Stripe API, enhancing user trust and streamlining the checkout experience.
- Refactored backend API architecture and database queries to support real-time inventory updates and reduce response times by 35%.

PROJECTS

PopScore | *Java, Spring Boot, React, MongoDB* — May 2025 – Jun 2025

- Built a movie review app with Java Spring Boot and React, letting users browse, rate, and review films.
- Created REST APIs with Spring Data and MongoDB Atlas, defined data using Lombok, and tested via Postman.
- Improved API response time by 30% through efficient data modeling and query optimization.

Social Distribution | *React, Python, JavaScript, HTML, CSS* — Oct 2024 – Dec 2024

- Developed a decentralized social network enabling post, comment, and like sharing across federated nodes.
- Crafted interactive UI components in React for seamless post creation, comments, and like animations.
- Enabled inbox-based cross-node notifications for likes and comments.

NBA Poeltl Solver | *Python, Flask, JavaScript, Pandas* — Oct 2024 – Nov 2024

- Created a browser based Flask app to assist users in solving the NBA Poeltl guessing game directly in the browser.
- Integrated custom filters for team, position, height, age and jersey using real-time NBA stats.
- Reduced average guess attempts by 60% through optimized filtering logic using Pandas.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C/C++, SQL, TypeScript, HTML, CSS, Julia, Assembly (RISC V)
Frameworks: React, Node.js, Django, Spring Boot, Flask, Angular, Express, .NET, Three.js, Vue
Developer Tools: Git, Docker, PostgreSQL, MongoDB, Firebase, AWS, Google Cloud Platform, Heroku, Firestore, Cybera, CI/CD
Libraries: NumPy, Pandas, PyTorch