

Ishaan Ratanshi

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EDUCATION

- **University of Alberta** Edmonton, AB
Bachelor of Science in Computing Science, Minor in Economics Expected 2026

PROJECTS

- **WebEdit** | *Python, React.js, Node.js, Flask* Apr 2024 – Present
 - Utilized React.js and Node.js to develop a full-stack web application for dynamic document creation and editing, ensuring seamless integration and scalability for up to **10,000** concurrent users.
 - Integrated an advanced word completion feature using over **466,000** words and Tries data structure, achieving a **50%** reduction in search time compared to using hash maps.
 - Enhanced user experience by reducing average document creation time by **25%** through real-time suggestions and efficient editing capabilities.
- **HelpBot** | *Python, Chainlit, Transformers, spaCy, BeautifulSoup* May 2024 – Jun 2024
 - Software engineered a multi-purpose conversational Chatbot by leveraging spaCy for entity recognition and ChatterBot for conversation flow, achieving an **75%** accuracy in understanding user intents.
 - Utilized Chainlit to create a user-friendly interface that supports real-time updates and dynamic content rendering.
 - Integrated APIs for real-time weather updates, stock and ETF information, and utilized BeautifulSoup for web scraping.
 - Employed Meta-Llama-3 for generative AI tasks and GPT-2 for summarization, enhancing the bot's capabilities in generating coherent responses and summarizing information effectively.
- **Stocker** | *Python, Swift, TypeScript, TailwindCSS, Next.js, Node.js, SwiftUI, Flask* Mar 2024 – Jun 2024
 - Developed full-stack web and iOS applications for stock market prediction with user-friendly interfaces in Next.js and SwiftUI.
 - Designed and implemented Time Series Forecasting algorithms for stock prices using XGBoost and Bayesian Neural Networks, achieving a combined model RMSE of **0.0376**.
 - Integrated real-time stock data enhancing prediction accuracy by **50%** compared to with static datasets.
 - Utilized Optuna for hyperparameter optimization, resulting in a **30%** improvement in model accuracy.

RELEVANT EXPERIENCE

- **Coding Instructor** Mar 2024 – Present
Code Ninjas Edmonton, AB
 - Improved **30+** students on development skills for JavaScript via project-based learning, enhancing their problem-solving abilities.
 - Provided individual feedback and instruction to address diverse learning needs, resulting in an increased understanding of fundamental programming concepts.

TECHNICAL SKILLS

Languages: HTML, CSS, JavaScript, TypeScript, C#, Python, Swift
Frameworks: Flask, FastAPI, Tk, Next.js, Node.js, Optuna, Pyro, TailwindCSS, SwiftUI, PyTorch
Developer Tools: Git, Visual Studio, Xcode, Google Colab
Libraries: React.js, pandas, NumPy, Matplotlib, scikit-learn, tkinter, PyQt5