Milan Pattni

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EDUCATION

University of Waterloo **Expected Graduation: Apr 2028**

BASc in Software & Robotics Engineering, Artificial Intelligence Specialization (GPA: 80%) *Waterloo, ON*

- Relevant Courses: Data Structures & Algorithms, Digital Computation, Digital Logic, AI & Society, Calculus II, Circuits

EXPERIENCE

AI Software Engineering Intern **May 2025 – Aug 2025**

8090 Solutions (Startup) *Menlo Park, CA*

- Incoming Summer 2025, AI Systems & LLM Integration

Software Engineering Intern **Sep 2024 – Dec 2024**

Pratt & Whitney *Toronto, ON*

- Developed a scalable internal application using JavaScript and PostgreSQL that serves **40,000+ users**
- Engineered a reusable, dynamic commenting framework using PHP and AJAX that integrates frontend input with an SQL database, **increasing UI responsiveness by 250%** across the application
- Optimized form processing with Symfony's sanitization and controller-model logic, **reducing input delays by 95%**
- Modularized **10+** backend and frontend components to streamline developer integration and accelerate deployment
- Co-led a live demonstration of the pre-release application to **20+** senior executives, securing future project funding

Software Engineering Intern **Jan 2024 – Apr 2024**

TD Bank *Toronto, ON*

- Designed a TypeScript application that streamlines account navigation and UX for **10,000+** staff, **saving 2 hours/week**
- Built **3+** REST API endpoints for a microservices platform, optimizing data retrieval speed and efficiency
- Implemented a Webpack caching solution that asynchronously updates assets, **reducing page loading errors by 50%**
- Collaborated with an Agile team to implement CI/CD pipelines using Jenkins and optimize workflows in Jira/Confluence

PROJECTS

Course Availability Notifier | *Published Project (~100+ Hours)* courseclutch.com

- Created a full-stack platform that monitors course enrollment data and delivers seat alerts to **80,000+** students
- Automated live data updates for **7,000+** courses by developing **2+** REST API endpoints for the University of Waterloo and Western University, hosted on AWS Lambda through a FastAPI-powered Python backend
- Utilized AWS DynamoDB and PostgreSQL for scalable storage, resulting in a **40% faster course search** on the platform

Predictive Transit Delay Model | *Design Team Project (~8+ Months)* github.com/WAT-ai/DelayNoMore

- Worked with an **8+** member team as part of WAT.ai to develop a machine learning model for predicting TTC delays
- Integrated **4+** APIs for real-time weather and traffic data, processing **34M+** rows to improve prediction accuracy
- Analyzed **10+** years of data using Pandas and Matplotlib, identifying trends and key delay patterns across **300+** routes

Contextual LLM Document Generator | *Personal Project (~20+ Hours)* github.com/notmnp/clai

- Programmed a Selenium script to retrieve and extract structured data from web pages with **95% accuracy**
- Leveraged Google Gemini's API to refine extracted content and generate **3+** JSON-formatted outputs in **<5 seconds**
- Streamlined a **2+** stage document conversion, converting raw outputs into dynamically generated PDFs using Python

Minimax Connect 4 AI | *Personal Project (~10+ Hours)* notmnp.github.io/#play

- Scripted a terminal-based game using Minimax with Alpha-Beta pruning, evaluating **50,000+** game states per move
- Architected an AI opponent with a **90%-win rate**, driven by a **7+** depth-limited search and heuristic board evaluation

SKILLS

Languages: Python, JavaScript, TypeScript, Java, C/C++, SQL (Postgres, MySQL), HTML/CSS, PHP, Bash

Frameworks: React.js, Node.js, Symfony, FastAPI, Flask, TensorFlow, Pandas, NumPy, Selenium, Matplotlib**,** Twig, Tailwind

Tools: AWS, Git, Docker, Kubernetes, IntelliJ, Postman, Jupyter Notebook, Jira, Confluence, Apache Maven, Webpack, Figma