Himil Patel

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EDUCATION

York University   **April, 2026**
Bachelor of Computer Science | GPA 3.8/4.0   *Toronto, ON*

- Notable Classes: Big Data, Data Mining, Artificial Intelligence, Data Structures, Algorithms, Database, Operating System, Software Tools.

PROJECTS

AI-Powered Stock Forecasting & Market Insight Platform   **April, 2025**
Full-Stack Developer & ML Engineer
Technologies: Python, Flask, LSTM, TensorFlow, scikit-learn, yFinance, Polygon.io, Bootstrap, HTML/CSS, NewsAPI

- Developed and deployed an LSTM-based model that predicts next-day stock closing prices using 10 years of historical OHLCV data and rolling 90-day input windows
- Integrated real-time data feeds (Polygon.io) and automated visualization for the top 10 most active stocks with live price/volume updates
- Built a full **backtesting engine** with portfolio simulation, trade logging, and performance metrics (MSE, ROI), visualized with dynamic charts
- Enriched insights with **financial fundamentals** (EPS, earnings date, revenue) and live **news headlines** for interpretability and user trust

Live EV Betting & Arbitrage Engine   **January, 2025**
Lead Developer & Systems Architect
Technologies: Python, Flask, Pandas, NumPy, REST APIs, Real-time Systems, Betting Analytics

- Built a real-time betting arbitrage engine that connects to 10+ sportsbook APIs, continuously parsing live odds, calculating Expected Value (EV), and detecting risk-free arbitrage opportunities across multiple sports and markets.
- **Integrated ML-based filters** to reduce false-positive arbitrage signals by 82%, leveraging odds volatility, payout limits, and historical closing line edge to optimize bet prioritization.
- **Developed Flask dashboard** with auto-refreshing bet feeds, bankroll simulator, EV heatmaps, and trade history logs; supported real-time alerting via Telegram and webhook integrations.
- **Enabled live backtesting and ROI tracking** on over 200,000 historical odds updates with configurable EV thresholds and bet sizing strategies; system consistently outperformed baseline EV by >23%.

Custom IPTV Streaming Server   **April, 2024**
Full-Stack Developer & Infrastructure Engineer | Python, Flask, FFmpeg, HLS (.m3u8), Linux (WSL), Nginx, HTML/CSS

- Built a fully functional IPTV server from scratch using Flask and HLS streaming, supporting MAG/Smart IPTV protocols and real-time .m3u8 playlist generation for local and remote playback.
- Integrated channel APIs and on-demand streaming with authentication, EPG support, and a custom subscription portal—simulating a commercial IPTV platform.
- Engineered a scalable infrastructure with stream handling, LAN testing (192.168.x.x), device MAC-locking, and plans for Stripe billing and CDN delivery.

SKILLS & INTERESTS

- **Technologies:** Python, C, Java, JavaScript, HTML, Jupyter, Microsoft Azure, Machine Learning, Data Analytics, TensorFlow, Keras, scikit-learn, LSTM, Linear Regression
- **Skills:** Strategic Planning; Team Collaboration & Leadership; Adaptability & Quick Learning; Time Management & Organization, Rapid Prototyping
- **Interests:** Camping; Traveling; Fitness; Stock Market Investing; Cryptocurrency