

# Silin Raj Gupta

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## EDUCATION

### University of Waterloo

Bachelor of Computer Science, Honours, Co-op

Sep 2024 – Present

## SKILLS

**Languages:** Python, Java, C, C++, C#, JavaScript/TypeScript, Racket, Lisp, Scheme, HTML/CSS, SQL

**Frameworks:** React.js, Next.js, Node.js, Django, Flask, FastAPI, GraphQL, Tailwind CSS

**ML/AI:** TensorFlow, Scikit-learn, Pandas, NumPy, LangChain, RAG, Vector Embeddings

**APIs/Integrations:** OpenAI, Google Gemini, Grok, Sonar (Perplexity) Spotify, Twilio, ElevenLabs, VAPI

**Tools:** Git, Bash, Docker, Pinecone, Vercel, Render, AWS (EC2), CI/CD, Microsoft Azure, Postman, Figma

## PROFESSIONAL EXPERIENCE

### PolicyAdvisor

May 2025 – Aug 2025 | Toronto, ON

Software Engineer Intern

- Developed, tested, and debugged a Next.js + Python (FastAPI) proposal-automation platform powered by Google Gemini API; accelerated processing from 5–6 hrs → 2–5 mins with 99%+ accuracy across 10+ carriers, driving ~\$100,000 in annual operational savings.
- Spearheaded a visitor insurance sales platform (vIQ) by leading a cross-functional team; launched in 2 weeks, integrating 10+ carrier APIs and intelligent caching.
- Architected an internal life-insurance eligibility chatbot (LLM + carrier rules) using Next.js/TypeScript with Pinecone-backed RAG and vector embeddings, streamlining advisor workflows during live calls.
- Orchestrated a 24/7 AI voicebot (n8n + ElevenLabs + Twilio + Google Calendar) that handled client calls and auto-scheduled callbacks, reducing missed leads by 40%.
- Designed an automated blog QA pipeline using Perplexity, Grok, and OpenAI APIs across 5 checkpoints, generating polished HTML review reports.

### Modulus Systems

Apr 2024 – Jun 2024 | New Delhi, India

Software Engineer Intern

- Developed predictive AI models using Python and Scikit-learn, reducing customer churn by 20%.
- Executed digital marketing campaigns with Google Analytics, driving 1,000+ monthly visitors and engineered ML pipelines.

### Mentors Ethicare

May 2023 – Aug 2023 | New Delhi, India

Software Engineer Intern

- Constructed a HIPAA-compliant telemedicine platform development using Python and Flask, accelerating virtual care access by 40%.
- Engineered MySQL database schemas featuring optimized indexing, cutting patient record retrieval time by 250ms and supporting 80 concurrent users with zero performance degradation during peak hours.

## PROJECTS

### Muse Sketch Studio [Replicate AI Hackathon Winner]

- Built a complete AI-powered fashion design workflow transforming text prompts into professional runway videos through 5-step pipeline (sketch → colors → model → 3D → runway).
- Integrated Google nano-banana and Kling v2.1 models via Replicate API for professional fashion sketches and video generation.
- Developed responsive React/TypeScript frontend with real-time generation tracking and downloadable outputs.

### Moosic - AI Playlist Generator

- Launched a website generating 100+ playlists weekly by combining Spotify and OpenAI APIs for playlist creation.
- Built seamless Spotify API integration for authentication, playlist creation, and top song retrieval.
- Deployed a scalable architecture (Render backend + Vercel frontend) with 100% uptime.

### CompareIQ – Document Intelligence Engine

- Built an intelligent PDF parsing engine for insurance policy comparison, enabling 99% faster data extraction.
- Backbone of proposal automation now used internally by PolicyAdvisor.

### vIQ - Multi-Carrier Visitor Insurance Platform

- Developed a consumer-facing web platform integrating 10+ insurance carrier APIs.
- Recognized internally as the most complex intern-led project, enabling real-time pricing with intelligent error-handling and caching.
- Powers PolicyAdvisor's visitor insurance sales growth.