Dongwan (Jamie) Seoh

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EDUCATION

University of Waterloo Sep 2025 – Present
Bachelor of Software Engineering, Honours | 2 × scholarships | 3 × Hackathon Winner ***3.96/4.0 GPA***

EXPERIENCE

Full Stack Developer Nov 2025 – Jan 2026
Nebula AI *Waterloo, ON*
- Developed a full-stack **AI note-taking mobile app** with **React Native** & **FastAPI** to help students digitize and retrieve handwritten notes faster, accelerating study workflows; Employed **agile development** in a team of four.
- Implemented an **OCR+AI pipeline** with Gemini/OpenAI, enabling handwritten text extraction and summaries.
- Enabled **semantic search** over **1,536-dim embeddings**, cutting retrieval time **40%** by IVFFlat indexing.
- Designed **multi-tenant data access** using Supabase Auth, JWTs, and RLS policies across 3+ relational tables.
- Orchestrated the containerization of backend using **Docker** and deployed to **Google Cloud Run**.
- Automated **CI/CD** pipelines for rapid, reliable deployments and horizontal scalability to Apple's **TestFlight**.

Software Developer Sep 2025 – Nov 2025
UW Orbital Satellite Mission Design Team *Waterloo, ON*
- Built Mission Control Center dashboards in **React** to improve visibility into satellite telemetry and mission state.
- Implemented **REST APIs** to serve async requests to MCC, **standardizing** data contracts between subsystems.
- Authored **unit and integration tests**, achieving **95% UI coverage** with **vitest** for Mission Control Center.

Web Development Intern Jul. 2023 – Aug 2023
PNPT Co., Ltd. *Gangnam District, Seoul*
- Collaborated on early-stage website **optimization** for a startup, enhancing usability and brand presentation.
- Prototyped responsive UI designs using **Figma** & **React**, accelerating design iterations and stakeholder feedback.

PROJECTS

Quota — Real-time Financial Intelligence For Codebase | ⌻ 🏆 DeltaHacks12 First Place
- Engineered a developer tool providing real-time API cost insights, helping startups cut API spend by up to 40%.
- Built extension with **TypeScript** providing **inline cost annotations**, heatmaps, and **one-click optimizations**.
- Indexed codebases **<3s**, **45x faster** than AI IDEs, using **AST parsing** to detect inefficiencies in design choices.
- Created **React Flow** sandbox for budget-aware system planning with **RAG Gemini** chatbot by **LangChain**.

Personal CRM — Manage Personal & Professional Relationships | ⌻
- Built a robust full-stack CRM (**Next.js, FastAPI**) to centralize and prioritize professional relationships at scale.
- Architected backend with **20+ REST** endpoints, enabling pagination & dynamic fetching for growing datasets.
- Improved system reliability through **caching layers** and **rate limiting**, reducing server load by **30%**.
- Designed a **matrix-based algorithm** to rank contacts, enabling users to focus on high-value relationships.

AWARDS

2025 & 2024 Euclid Math Contest Top **7.6%** among all contestants

2025 STEM Fellowship Big Data Challenge Finalist
Published **academic paper:** *"Literary Factors Analysis"* (DOI #: 10.17975/sfj-2025-001).

EXTRACURRICULAR INVOLVEMENT

Sponsorship Director, Head of Finance Dec 2024 – Present
Ignition Hacks | 🔗 *Toronto, ON*
- Raised **$10K** in sponsorships from partners like Siemens, Deloitte, and UWaterloo to fund a 260-person hack.

TECHNICAL SKILLS

Languages: Python, C/C++, TypeScript & JavaScript, HTML & CSS, SQL, Java, R
Frameworks and Libraries: PyTorch, NumPy, React.js, React Native, Next.js, Svelte, Tailwind CSS, FastAPI, Flask
Developer Tools: Git/GitHub, VS Code, Docker, GCP, Azure, Vercel, Cloudflare, MongoDB, Bash, Figma