Dylan Nagel

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EDUCATION

University of Waterloo   Sep. 2023 – Expected 2028
Bachelor of Computer Science - Honours Cooperative Program   *Waterloo, ON*
- **Overall Cumulative GPA:** 3.9
- **Coursework:** Object-Oriented SWE, Logic and Computation, Tools for SWE, Algorithms/Data Abstraction

TECHNICAL SKILLS

Languages: Java, Python, C, C++, C#, JavaScript, TypeScript, SQL, Bash
Frameworks & Libraries: React, Node.js, Express, Django, Flask, FastAPI, .NET, MonoGame
Cloud & Data: AWS (S3), GCP, PostgreSQL, MySQL, MongoDB, Redis, Kafka
Tools & Workflow: Docker, Kubernetes, n8n, Git, Jenkins, Figma, Cloudflare, Jira

EXPERIENCE

Software Development Intern   Sep. 2025 – Present
Carta Inc.   *Waterloo, ON*
- Engineered an AI email routing service (**Python/Django**) projected to automate **15% of 1.5 million annual emails**, saving an estimated six-figures in yearly operational costs.
- Built core backend infrastructure by designing a RESTful API and refactoring the **PostgreSQL schema** to enable AI data logging and frontend display of model predictions.
- Enhanced the Fund Admin dashboard, scaling to serve over **2,000 monthly business users**, by implementing React features and integrating Snowplow for analytics within a **Docker** and **Kubernetes CI/CD** pipeline.

Full Stack Developer   Jan. 2025 – May 2025
Empathia.ai   *Pasadena, CA*
- Contributed to a full-stack RAG system (**Python/TypeScript**) that leveraged user notes to boost AI smart edit accuracy by 30% for over 1,000 users and enhance content personalization.
- Launched a blog portal (images on **S3**, rich text in **MongoDB**), enabling autonomous publishing of SEO-rich posts with metadata, boosting organic traffic 20% and recognized as a transformative by the marketing lead and CEO.
- Revamped website notifications and feature requests with improved UX and backend automation, streamlining feature rollouts and enabling direct access requests, **reducing manual processing by 50%**

Website Developer   May 2024 – Jan. 2025
Empathia.ai   *Pasadena, CA*
- Independently drove the design, development, and deployment of Empathia.ai's website using **React** and **Node.js**, consulting with marketing and engineering teams to refine performance and user experience.
- Integrated Google Tag Manager and Google Analytics to optimize audience tracking and implemented an improved SEO strategy, resulting in a **68% growth in search traffic** within the first quarter
- Designed and executed email marketing campaigns via Mandrillapp and Mailchimp, boosting open rates and **improving customer retention by 18%**

PROJECTS

🐙 **Acronymize** | *React, TypeScript, Python, Django, PostgreSQL, Git*
- Developed a full-stack word puzzle game with a React/TypeScript frontend and Django backend, featuring three dynamic game modes and secure user authentication via Clerk to support progress tracking.
- Implemented a unique player feedback system using Wordle-style hints and an ML sentence transformer model to provide real-time guess similarity scores, significantly enhancing gameplay interactivity.

🐙 **FlowSense** | *JavaScript, React, Python, Node.js, PostgreSQL, Django, Git*
- Engineered a dynamic reading platform with a React.js frontend, Django backend, and PostgreSQL database, enabling real-time contextual definitions, inline annotations, and seamless PDF processing
- Engineered a feature using a RAG approach with the OpenAI GPT API to provide context-aware word explanations; this innovation earned **1st place among 100+ teams at Hack the North**.

🐙 **Tanks** | *C#, MonoGame, .NET, Git*
- Implemented the A* pathfinding algorithm, resulting in more natural and intelligent enemy movements in game scenarios, significantly improving gameplay realism
- Architected an object-oriented game with personality-driven AI pathfinding and mathematically-robust auto-aim, engaging 30+ beta testers and increasing average session durations by 20%.