Juho Choi

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EDUCATION

University of Waterloo & Wilfrid Laurier University   Sep 2021 - Aug 2026
Bachelor of Computer Science & Business Administration (Double Degree Program)   *Waterloo, ON*

EXPERIENCE

Software Engineer Co-Op   Jan 2025 – Present
QuadReal   *Toronto, ON*
- Built **5** interactive pages and **7** modular React components using **Next.js, TailwindCSS, MapLibre, and Deck.gl** to visualize complex spatial-temporal analytics, improving frontend scalability and performance
- Developed backend services with **Go, PostgreSQL/PostGIS, and Supabase** to ingest, transform, and serve geospatial data from OpenStreetMap (OSM), enabling spatial queries via **REST API**
- Engineered an **automated geospatial data pipeline** by integrating Overpass API, GeoJSON processing, and **PostGIS + DBT** workflows
- Optimized spatial queries using PostGIS indexing and boundary filtering, reducing response times by **30%** on average
- Leveraged **N8N and Airbyte** to orchestrate data ingestion from OSM and streamline updates to Supabase-backed PostGIS storage

Data Engineering Co-Op   Jan 2024 - Apr 2024
Eclipse Automation, Part of Accenture   *Cambridge, ON*
- Designed and implemented an **automated ELT pipeline**, integrating **PostgreSQL** with **Power BI**, reducing manual reporting time by **80%** through scheduled data refreshes
- Optimized **SQL queries**, improving query execution efficiency and enhancing Power BI report refresh performance
- Developed and refined **data models**, ensuring data integrity for **10K+** records and improving reporting accuracy
- Automated scheduled data extraction from PostgreSQL, enabling weekly synchronization of **50K+** rows into Power BI dashboards
- Enabled automated performance tracking for **20+** users by integrating sales metrics into Power BI dashboards

Fire Direction Officer (Military Service)   Oct 2019 - May 2021
Republic of Korea Army 21st Infantry Division Artillery   *South Korea*
- Calculated the trajectory of shells using climate data, honing **problem-solving** and **data analysis skills** in high-pressure environments
- Improved **attention to detail** by maintaining and updating climate data, ensuring consistent accuracy across the team
- Strengthened **leadership** and **coordination** by sharing critical data with 9 other officers

PROJECTS

Quick Tweet - Full-Stack Social Media Web App
- Developed a Twitter-like social media platform with **5** interactive pages using **React**, **TypeScript**, **Firebase**, and React Router for user authentication, data storage, and real-time tweet interactions
- Integrated **Firebase Authentication** supporting 2 sign-up methods (email/password and GitHub OAuth)
- Implemented full CRUD functionality with **Firebase Firestore** for tweet creation, deletion, and retrieval, with real-time updates using **onSnapshot** listeners
- Built over **12** custom React components, including **20+** reusable styled-components, ensuring consistent design
- Deployed front-end to **AWS S3** and **CloudFront** and hosted backend on Firebase, improving performance and user experience

StayEase - Backend Web Application
- Developed an Airbnb-like backend web application using **Django** and **Django REST Framework**, implementing **RESTful API** endpoints for room listings, bookings, reviews, and user management
- Implemented a JWT-based authentication system for secure user login and access control
- Designed and integrated **12** Django models—including Room, Booking, Review, Category, Experience, and a custom User model—establishing complex relationships using **Django ORM**
- Built full CRUD functionality with **serializers** for all models, enabling efficient data manipulation

Cryptocurrency Price Tracker
- Developed a cryptocurrency tracking web app with **5** interactive pages using **React**, **TypeScript**, and **react-query**, featuring over **20** fully styled and reusable React components for real-time data fetching and minimal re-renders
- Built a custom currency conversion feature using **RapidAPI**, allowing users to convert cryptocurrency prices into multiple national currencies dynamically
- Implemented interactive candlestick charts with **ApexCharts**, providing detailed visualizations of price movements
- Created reusable, theme-aware UI components using **styled-components**, ensuring consistent design and modularity across the application

SKILLS

Languages: Javascript, Typescript, GO, Python, C++, C, PostgreSQL, Spatial SQL (PostGIS), HTML/CSS
Frameworks/Libraries: React.js, Next.js, Node.js, Django, Tailwind CSS, DBT
Cloud Services: AWS S3, AWS CloudFront, Firebase
Development Tools: Git, Azure DevOps, Jupyter Notebook, Airbyte, N8N, Playwright, PowerBI