



Carl Ek

SENIOR SOFTWARE ENGINEER

Details

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NATIONALITY
Dual Canada/USA

Links

www.linkedin.com/in/carlek
www.github.com/carlek

Skills

Airflow
API
AWS
C/C++
Cassandra
Django
Docker
FastAPI
Github
Grafana
GraphQL
Java
Kafka
Kubernetes
MySQL
NumPy
Pandas
PostgreSQL
Python3
Springboot
SQLAlchemy
T-SQL
Tableau
Terraform
Attention to Detail

Profile

I am a Senior Software Engineer with experience as individual contributor and team lead across many industries. Recent projects: LLM Chatbots, Web3.0 dApps, cloud-based microservice apps, Ad Tech & Fin-Tech with ML. Prior experience as consultant on software quality and lead developer of early C/C++ compiler extensions for High Performance Computing.

Employment History

Principal, CARLEK (Self-Employed, Various)

JANUARY 2008 – PRESENT

Current: LLM Optimization, specializing in programming languages and improving performance and accuracy of LLM-generated code. Ongoing: ICP dApps - LLM ChatBot for motorcycle maintenance. (ICP, Python, Solidity, Motoko, Rust, OpenAI, WandB, LangChain)

Lead Python Engineer, Softvision (Freelance)

NOVEMBER 2022 – APRIL 2022

Project: Bootcamp for client demands and requirements. ☑ Java, Springboot, microservices, various AWS courses.

Senior Software Engineer, NextEra Analytics (Green Energy)

JANUARY 2022 – AUGUST 2022

Project: Green Energy and carbon zero goal tracking. Developed endpoints for carbon-zero calculators ingesting IoT smart meter data: cloud-based microservices. Developed a design pattern for an abstract database model which other teams adopted, increasing developer velocity.

Senior Tools Engineer, Tatari (AdTech)

MAY 2021 – DECEMBER 2021

Project: Internal tools and visualizations for new client onboarding. Returned to the Ad-Tech world to develop internal client service tools and visualizations to detect integration anomalies. With discrepancies resolved customer retention increased by 30%.

Cloud Engineer, Change Healthcare (Microservices)

NOVEMBER 2020 – APRIL 2021

Project: Healthcare record ingestion system. Implemented complex translations of data pipelines within a microservice Health Care transaction system. Wrote code to aggregate and consolidate to a standard ISO data format, increasing revenue stream for 20% of the clinic portfolio.

DB Admin and Developer, World Library Foundation

AUGUST 2020 – OCTOBER 2020

Full-Stack sole-developer: Recovered the Gutenberg self-publish website and database: 60% of legacy customers returned, and the business was saved.

Senior Cloud Engineer, Agari (SaaS)

JULY 2019 – APRIL 2020

Project: Secure email in the cloud. Backend development for micro-framework serverless application endpoints and processes, system dashboards, and Slack notications. Successful experiment with 1000 customers with a new at-scale sensor design.

Senior Software Engineer, Oculus (Manufacturing)

OCTOBER 2018 – DECEMBER 2018

Project: investigate and develop initial designs and prototype REST API code for a new assembly line.

Communication

Leadership

Teamwork

Languages

English

Senior Engineer, TrueAccord (FinTech)

JANUARY 2018 – AUGUST 2018

Project: Automated Debt Collection. Responsible for "Heartbeat" a Python-based state machine for fundamental rules driving the entire business: Key projects: baseline metrics, and software experiments.

Lead Software Engineer, Moasis (AdTech)

JANUARY 2014 – DECEMBER 2016

Responsible for building a team, developing and enhancing processes, backend infrastructures,, Created dashboards for Product and System Analytics. Investigated and saved \$25K/month in billing discrepancies due to packet loss or fraud.

Lead Staff Programmer, CoreLogic (Bond Analytics)

JANUARY 2011 – DECEMBER 2013

Project: Mortgage Backed Security Bond Analytics. Responsible for improvements on the entire stack: implemented continuous build+test tools, wrote custom ETL processes, designed interactive bond rating charts, developed numerous backend APIs for data extraction and analysis.

Architect, Code Integrity Solutions (Consulting)

JANUARY 2009 – DECEMBER 2010

As the rst technical employee, I helped grow client base from 0 to more than 20 customers in a successful startup consulting business. With our expert knowledge and ecient delivery, customers maximized their usage of static analysis tools and processes and minimized software defects. Hired and mentored staff, and derived best practices for internal use and partner companies. Developed a production suite of tools to enforce effective C/C++ coding. Notable projects: NASA Mars Lander (Curiosity) space-ight validation

Senior Engineer, Coverity (now Synopsys)

JANUARY 2007 – DECEMBER 2008

Consultant to senior technical customers on issues of multithreading, quality, and security. Delivered engaging seminars at embedded systems conferences.

Software Engineer, Electronic Arts

JANUARY 2005 – DECEMBER 2007

Project: develop high performance cross-platform C++ language extensions for vectorized algorithms on PlayStation and Xbox. Wrote sample code, developers guide, and a detailed report on features, benefits, challenges, and future possibilities for senior technical staff

Lead Software Engineer, IBM Canada Software Lab

JANUARY 1998 – DECEMBER 2005

Project: design and implement new methods to support high performance vector algorithms in C. As lead, our team developed Unifed Parallel C (UPC) which eventually became an IBM product.

Education

Bachelor of Science, University of Manitoba

Master of Mathematics, University Of Waterloo

Predictive Analytics (Coursework), Northwestern University