

Zekun Song

Applied AI | AI Product Engineering | Backend Systems

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Canadian PR

EDUCATION

University of Toronto (St. George)

Sep 2023 - Dec 2027 (Expected)

Honours Bachelor of Science - Double Specialist in Computer Science and Data Science

Toronto, ON

2025–26 GPA: 3.89/4.00 | Registered UofT co-op student

Honours: Dean's List Scholar; Reuben Wells Leonard Scholarship

Coursework: Databases, Software Engineering, Machine Learning, Data Science I & II, Statistical Modelling, Time Series Analysis

EXPERIENCE

Remeda - Hospital-Partnered Clinical AI

Apr 2026 - Present

Backend & Data Engineer | Clinical AI Platform

Toronto, ON

- AI Data Services:** Built a FastAPI/asyncpg service to standardize terms extracted from clinical notes, mapping diagnoses, medications and lab tests to consistent codes for database storage and downstream AI workflows.
- Data Pipelines:** Integrated 12 coding sources and 90,000+ reference rows into PostgreSQL via API ingestion and bulk ETL.
- Reliability:** Hardened ETL with safe reruns, batched SQL writes, file-integrity checks and 60+ automated tests; validated reference data against published specifications and excluded a metric unsupported by the source data.
- Deployment & QA:** Supported deployment, troubleshooting and end-to-end validation for an industry demo.

Shell (Shanghai) Technology Co., Ltd.

Jun 2024 - Sep 2024

Data Science Intern

Shanghai, China

- LLM Integration:** Integrated LLM-to-SQL into an internal analytics portal with schema and permission checks.
- Self-Service Analytics:** Shipped an internal analytics portal; weekly ad-hoc requests fell from ~16 to ~7 after launch.
- Product Feedback:** Implemented query logging and usage analytics to support product feedback reviews.
- Reporting:** Built 10+ auto-refreshed Power BI dashboards over SQL pipelines, replacing recurring manual reporting.

WholeViz - Industry Partner Capstone

Sep 2025 - Dec 2025

Technical Product Lead | Full-Stack Analytics Platform

Toronto, ON

- Team Delivery:** Led a 6-person team delivering features for a Django/PostgreSQL analytics platform for non-technical users.
- Product Workflows:** Translated partner requirements into self-service analytics workflows and technical specifications.

SELECTED PROJECTS

CardioTrace | Python, R, Survival Analysis, Tableau [Report]

Jun 2026 - Present

- Model Validation:** Validated a Cox survival model for cardiovascular death risk on later survey cycles; achieved a survey-weighted 10-year C-index of 0.838 on 4,669 held-out participants with complete model inputs.
- Data Pipeline:** Processed 11 U.S. health survey cycles and built a 20,736-person cohort linked to mortality records.
- Reproducibility:** Built source-file integrity checks, 260 automated tests and CI gates that reject stale analysis outputs.
- Published Results:** Delivered a research website and three Tableau dashboards linking findings to reproducible analyses.

Personal Job Application OS | FastAPI, Next.js, MCP

Jul 2026 - Present

- Agent Tools:** Built an MCP server for AI agents to read ranked jobs, retrieve resume evidence and record application activity.
- Job Discovery:** Ingested a 10,921-posting snapshot across 58 employer job boards into a FastAPI/Next.js app.
- Explainable Ranking:** Added eligibility checks, deduplication and score breakdowns with supporting evidence.
- Human Approval:** Linked submission confirmation to a hashed snapshot of resume selection, answers and documents.
- Data Architecture:** Designed versioned SQLAlchemy/Alembic schemas, an audit trail and regression tests.

TECHNICAL SKILLS

Languages	Python (5 years), SQL (2 years), TypeScript (1 year), JavaScript
AI & Agents	OpenAI API, MCP, LLM-to-SQL validation, tool integration
Backend & Data	FastAPI, Django, PostgreSQL, Pydantic, SQLAlchemy/Alembic, ETL
ML & Analysis	Pandas, Scikit-learn, XGBoost, statistical modelling
Web & Testing	React/Next.js (basic), pytest, Git, GitHub Actions
Delivery	Docker, Linux