

# Derek Song

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## EXPERIENCE

### Graphics Administrative Assistant, Toronto City Council

April 2024 - Present

*City of Toronto*

*Toronto, ON*

- Designed 130+ marketing, event, and policy graphics with Adobe Illustrator, Photoshop, and InDesign, and captured 1,200+ photos using DSLR and Lightroom; materials reached **30,000+ households** and increased community engagement by 20%
- Assisted in planning, brand development, and marketing major community events for City Councillor Jamaal Myers, including a 1,000+ attendee community barbecue, park consultation with 450+ residents, and holiday market with 15+ sponsors
- Engineered and deployed a scalable Flask interactive event and dataset map integrating Firebase, Google Maps, and Toronto Open Data APIs, with threaded background tasks, Redis caching, and rate-limiting
- Analyzed bike usage data and surveyed/interviewed 70+ residents using Python and Pandas to inform transportation policy

### Product Designer and Software Developer, Laurier Start-Up Lab

September 2025 - December 2025

*Lazaridis School of Business & Economics at Wilfrid Laurier University*

*Waterloo, ON*

- Deployed and maintained several end-to-end full-stack platforms, including the Winternship Job Portal, driving a **98% increase in revenue (\$3,400+)**, onboarding 137+ students, expanding job supply by 48%, and supporting 120+ positions
- Led user-centred design and usability testing** for a BU354 human resources dashboard, validating Figma prototypes with 59 students using **t and chi-square tests**, implemented findings in a secure backend using Prisma and BetterAuth
- Built a **real-time ingredient recognition system** for a grocery store, using TensorFlow, Keras, and Teachable Machine to classify food items and generate complementary product recommendations from a 20K+ transaction dataset.
- Collaborated with entrepreneurs and directors to design 8+ end-to-end user flows for Elara's PowerBI payroll application, alongside investor-ready pitch assets for a film venture supporting multi-million-dollar funding applications.

### Software Developer and Data Analyst

April 2025 - September 2025

*Our Greenway Conservancy*

*Toronto, ON*

- Deployed an interactive park route finder to determine shortest-path navigation with **Dijkstra's algorithm**, using React, Turf.js, TypeScript, and PostgreSQL, with geospatial data processed in QGIS
- Automated web-to-LaTeX pipeline** in Python using BeautifulSoup to scrape and generate structured documents **reducing report preparation time by 80%** and ensuring consistent formatting across 20+ documents
- Led a brand refresh and a heuristic evaluation utilizing Nielsen's principles to meet Web Content Accessibility Guidelines (WCAG) standards, resolving **16+ critical pain points** identified through stakeholder feedback and accessibility testing
- Developed a reusable HTML/CSS component kit website with documentation to streamline web development

### Community Planner and Graphic Designer

November 2021 - August 2023

*TTCriders*

*Toronto, ON*

- Analyzed qualitative data from stakeholders, media, and focus groups to produce TTCriders' Wheel-Trans and suburban transportation report, translating accessibility insights into policy-relevant findings.
- Created short-form videos in After Effects, surpassing 6K+ views, 200+ engagements, boosting web traffic by 15%

## PROJECTS

### Smart Bike Resistance Project | TensorFlow, Python, Swift, C++, Raspberry Pi Pico

January 2026 - Present

- Developed an AI-driven IoT controller (Raspberry Pi Pico) for real-time bike resistance automation using TensorFlow Lite trained on 350+ Strava activities, Apple HealthKit activity information, and a reinforced user feedback loop

### Toronto Census Visualizer | Python, Pandas, Plotly, Dash, JSON

July 2024 - October 2024

- Visualized interactive demographic insights across 158 Toronto neighborhoods by processing 2,600+ line census dataset

### YUlearn | React, TypeScript, PostgreSQL, Next.js, Python, Plotly

March 2025

- Built a full-stack app (3rd place, Lassonde Hackathon); forecasted market potential and enrollment using linear regression

## EDUCATION

### Wilfrid Laurier University

Waterloo, ON

*Bachelor of Science in Computer Science (Co-op Option), Minor in UX Design*

*September 2023 - Present*

GPA: 10.25/12 (3.8/4.0); Clubs: Executive Vice President at UX Laurier · Volleyball · Recreational Dance Team (5 performances)

## TECHNICAL SKILLS

**Languages & Frameworks:** Python (Pandas, Plotly, Flask, TensorFlow, Keras), Java, JavaScript, VBA, R, C, HTML/CSS, TypeScript (BetterAuth, Prisma, React, Next.js, Leaflet), SQL (PostgreSQL), Assembly, TailwindCSS, PowerBI, Swift

**Tools & Platforms:** Docker, Firebase, Cloudflare DNS, Git, GitHub, QGIS, WordPress, Supabase

**Design:** Figma, Adobe Photoshop, Illustrator, Lightroom, After Effects, Premiere Pro, InDesign, Acrobat, Procreate, Agile Design