

TIM JOHNS

SOFTWARE ENGINEER

ABOUT

I'm a programmer and educator with 13+ years of experience in full-stack web development, embedded systems, and software architecture. I've worked mostly at startups so I am used to handling diverse responsibilities. As a teacher, I have independently transformed programming novices into proficient software engineers through a comprehensive curriculum. I'm generally very flexible when investigating new roles.

WORK EXPERIENCE

Self-Employed

July 2020 – Present

Remote

Software Engineering Mentor

Developed mentorship programs for career-changers and experienced software engineers. Met with students remotely on a regular basis to review work, answer questions, assign goals, plan projects, provide specific topic lessons, and employ scrum techniques.

Highlights

- Transformed programming novices into proficient software engineers in under 1 year.
- Developed a full-stack web development curriculum with 14 modules, providing accurate time estimations to optimize skill acquisition and project completion.
- Authored foundational programming lessons with over 170 thoughtfully designed practice exercises, ensuring a hands-on and engaging learning experience for students at all levels.
- Employed a mastery-based mentorship strategy, customizing the learning journey for each individual, resulting in a thorough understanding of concepts and practical application in real-world scenarios.
- Elevated the skills of experienced software engineers through targeted mentorship, contributing to successful career advancement and significant skill enhancements.

Icewire Technologies

<https://github.com/SlimTim10/great-problems>
November 2020 – November 2022

Toronto, ON/Remote

Software Architect

Lead the development of a large and complex web platform for creating and sharing practice problems & problem sets for various University-level subjects.

Highlights

- Haskell / Go / PostgreSQL / REST API / Tailwind CSS / LaTeX
- Developed a custom markup language for writing and rendering practice problems.
- Designed and implemented a 6-phase data pipeline akin to a compiler, leveraging sequential processing, modular architecture, and optimization techniques to efficiently transform raw data into refined, structured outputs.

CONTACT



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<https://timjohns.ca>



LinkedIn
tim-johns



GitHub
SlimTim10

EDUCATION

2007
2010

University of Toronto

<https://www.utoronto.ca/>

Mathematics and Computer Science

SKILLS

Software Development

Haskell	HTML	CSS	JavaScript
TypeScript	Functional Programming		SQL
PostgreSQL	React	C	Ruby
Ruby on Rails	Python	PHP	

Technologies / Tools

Docker	AWS	Linux	Emacs
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Embedded Systems

C	Firmware Development	PCB Design
Schematic Design	Prototyping	
Microcontrollers	MEMS Sensors	Arduino

Teaching

Curriculum Development	Mentoring
Lecturing	Technical Writing
Lesson Planning	Project Design

LANGUAGES

English

Native speaker

INTERESTS

Rock Climbing

- ◀ Developed open source library for integrating Ace Code Editor with Reflex FRP.
- ◀ Used the cutting-edge Obelisk framework for full-stack Haskell development, including functional reactive programming.

Open Source

Lighthouse Labs

🌐 <https://www.lighthouselabs.ca/>
September 2017 – February 2021

Toronto, ON/Remote

Web Development Teacher

Lighthouse Labs is a prominent Canadian coding bootcamp renowned for providing immersive and intensive training in web development. The organization offers comprehensive, hands-on bootcamps designed to equip individuals with practical skills for successful entry into the technology industry.

Highlights

- ◀ Voted favourite mentor for three consecutive years.
- ◀ Designed and gave lectures and workshops about various technologies and subjects.
- ◀ Guided students through the entire lifecycle of their group projects, from ideation and tech stack selection to feature planning, task breakdown, and debugging support.
- ◀ Responsible for on-boarding and training newly recruited mentors.
- ◀ Conducted mock tech interviews.
- ◀ Supervised the primary coding evaluation.

Branding Academy

🌐 <https://www.brandingjobinterview.com/>
March 2019 – July 2019

Toronto, ON

Lead Instructor

Developed and lead a 12-week part-time course on frontend web development.

Highlights

- ◀ Curriculum development: lectures, workshops, and assignments.
- ◀ HTML, CSS, Responsive Design, JavaScript, React framework, Bootstrap CSS, REST APIs.

Art & Science Digital Experience Design

🌐 <https://artscience.ca/>
February 2017 – September 2017

Toronto, ON

Full Stack Developer

Art & Science is a digital marketing agency that connects ideas, experiences and technology to design the future of brands.

Highlights

- ◀ Built highly customized experiential websites with WordPress.
- ◀ Embedded system design and prototyping for experiential marketing products.

Freelance

July 2015 – January 2017

Toronto, ON

Freelance Electronics Engineer

Worked with startups and individuals to develop software and hardware electronics that met their unique needs.

Highlights

- ◀ PCB design for specific form factors.
- ◀ Firmware development.
- ◀ Worked with camera modules, QR code software, RF modules, 32-bit ARM microcontrollers.
- ◀ Debugged and repaired small batch electronic magic trick props.
- ◀ Hand-built prototypes through breadboarding and soldering.

Icewire Technologies

May 2010 – August 2016

Toronto, ON

Co-founder, Embedded Systems Designer

Lead the design and development of a high-precision inertial measurement unit data logger. The AG-1 data logger takes 6-axis measurements from accelerometer and gyroscope sensors and logs the data to a microSD card in CSV file format for general purpose usage.

Highlights

- ◀ Designed and implemented a robust FAT32 file system from the ground up to fit in a 16-bit microcontroller with limited RAM and flash memory.
- ◀ Achieved logging speeds of 6-axis data up to 640 Hz.
- ◀ Implemented in-field firmware update capability.
- ◀ Designed single button control interface and text file configuration for easy usage.
- ◀ Sourced, tested, and developed with various MEMS sensors.
- ◀ Designed schematic and 4-layer PCB.

Icewire Makerspace

August 2014 – July 2016

Toronto, ON

Co-founder, Instructor


Icewire Makerspace is an educational facility located in the Midtown neighbourhood in Toronto.

Highlights

- ◀ Taught hands-on workshops and classes to ages 12 to adult.
- ◀ Basic electronics, Arduino electronics and programming, robotics, PCB soldering, 3D printing and modeling.
- ◀ Instructed Toronto District School Board (TDSB) faculty members on using Arduino electronics as part of the board's STEM initiative.
- ◀ Incorporated and taught Arduino and programming at Bessborough Public School as a progressive extension of the school's math curriculum.

VOLUNTEER

QueerTech

 <https://queertech.org/>
February 2023 – June 2023

Mentor

QueerTech is a not-for-profit advocacy group for gender, sex and sexual minority (LGBTQ) professionals in the technology sector.

Highlights

- ◀ Met with multiple queer people in the tech industry to aid them with personal branding, networking, interviews, and technical skills.


PROJECTS

Daily Theme Tracker

August 2023 – Present


Inspired by the physical Theme System Journal (<https://www.themesystem.com>), the Daily Theme Tracker enables easy daily habit tracking.

Contributor - Certainty by Construction: Software and Mathematics in Agda

 <https://leanpub.com/certainty-by-construction>
December 2023 – Present

A book by Sandy Maguire on successfully wielding the Agda proof assistant: teaching everything you need to know to get productive in modeling problems and in verifying your solutions.

Easy Invoice Maker


 <https://github.com/SlimTim10/easy-invoice-maker>
May 2022 – August 2022

Easily generate PDF invoices which are emailed automatically to the client. From a simple YAML file, a PDF invoice is generated and sent to the client.

Highlights

- ◀ Reduced time spend on manual invoicing by 75%.
- ◀ Contributed to a 20% increase in overall productivity by minimizing administrative tasks and allowing for a greater focus on mentorship.

Intuitive JavaScript

 <https://intuitivejs.info/>
February 2021 – December 2021

Modern JavaScript lessons with practice exercises.

Highlights

- ◀ Over 170 thoughtfully designed practice exercises.
- ◀ Practical, functional, strongly typed.
- ◀ Used by learners worldwide.

And many more!

🌐 <https://github.com/SlimTim10>

August 2012 – Present

See my GitHub for projects I've made over the years.