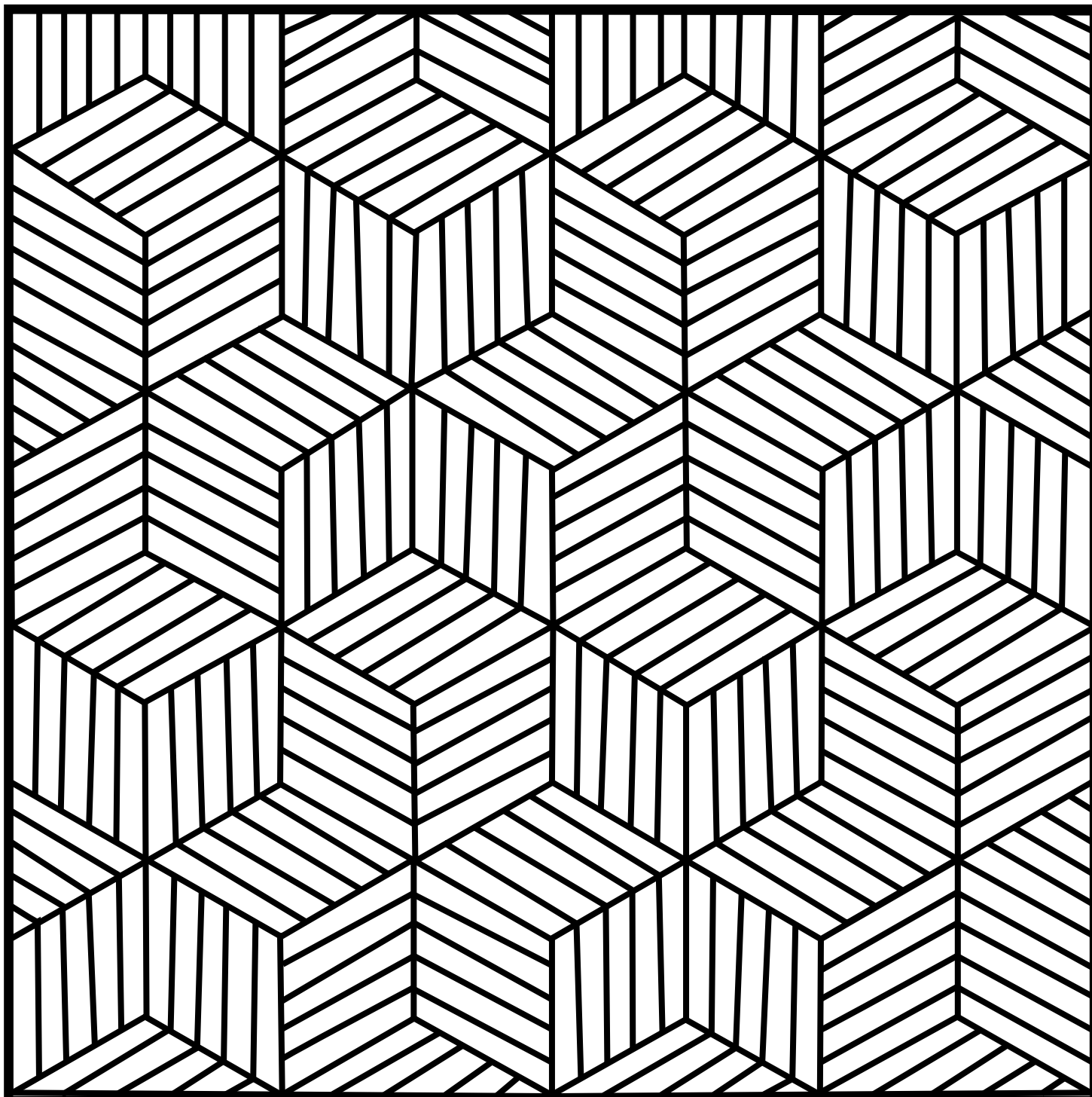


MADLab Five Year Review

2013-2017



ABOUT THE MADLAB

The MADLab is U of T's home for mobile app development support. It provides a central point of contact for all things mobile at U of T. The MADLab's home is a creative, collaborative workspace at Gerstein Library, overlooking King's College Circle. The MADLab is a collaboration between Information Technology Services, the Centre for Teaching Support & Innovation, and the University of Toronto Libraries to pilot new facilities in emerging technologies that go beyond mobile development, including 3D printing, VR equipment, and the iLightboard lecture capture recording app and studio.

The MADLab supports innovation in mobile app development and other emerging technologies at U of T through one-on-one consultations, workshops, talks, and events. The MADLab also provides app development services for U of T departments and outside clients, and has employed work-study students from U of T to assist with these projects.

COLLABORATIVE NETWORKING



One of the MADLab's key roles is to serve as a hub that brings people together. The lab does this by working closely with other groups on campus to host events and provide services available to all members of the University of Toronto community.

In collaboration with University of Toronto Libraries (UTL), the MADLab provides a number of popular services and ongoing training opportunities.

- The **3D Printing Facility** @ MADLab (launched October 2014) has delivered more than 100 training sessions and trained more than 1000 members of the U of T community (<http://guides.library.utoronto.ca/3Dprinting>)
- The **VR Facility** @ MADLab (launched Fall 2017) includes the HTC Vive room-scale VR facility (<http://guides.library.utoronto.ca/virtualreality>)
- The **iLightboard** Facility @ MADLab (launching Fall 2017) features a recording studio with companion mobile app for capturing innovative video lectures
- Joint UTL and MADLab workshops include Software Carpentry, 3D Object Design, and Designing Apps for Virtual Reality.

The MADLab also works with campus-linked innovation hubs and accelerators on projects including delivery of Xcode/Swift workshops in collaboration with the **Department of Computer Science Innovation Lab (DCSIL)** and the Entrepreneurship Librarian, and providing consultation services to their clients. Further, the MADLab engages with the University of Toronto Libraries collaborating regularly with Erica Lenton, Faculty Liaison & Instruction Librarian, Instruction Coordinator, Gerstein Science Information Centre collaborating around 3D Printing, VR, iLightboard and Software Carpentry projects. The MADLab has also worked with the **Jackman Humanities Institute's** Digital Humanities Network, including delivering "lightning talks" on finding developers for mobile projects & planning mobile projects and 3D printing workshops for digital humanities students. The MADLab has been invited several times to give guest lectures on app development for Kinesiology students, and together with UTL has delivered guest lectures on 3D Design in the Classroom for OISE students. The MADLab also supported the **Faculty of Applied Science and Engineering's** Coursera MOOC on Swift and iOS Development. More recently, the MADLab became a founding participant in the University of Toronto **AR/VR Interest Group**.

EVENTS

For the past five years, the MADLab has hosted, facilitated and supported a wide range of events, both in its own facility and outside.

- **The “Demo Scene” event** features demonstrations of apps by U of T students projects to U of T staff
- **“NthGenDevDays”** was a multi-day event that featured app talks, a career panel, and 24-hour hackathon

2013

- Hosted both an **Apple Keynote party and Google I/O Keynote party** (where members of the U of T community could watch the corporate keynote addresses together)
- **“StartUp Workshop”** was organized by the Career Centre and hosted by the MADLab
- “Going Mobile For Health” was **Toronto Health Libraries Association (THLA)** and **Health Science Information Consortium of Toronto (HSICT)** jointly run **mobile app ‘petting zoo’ event** hosted at the MADLab
- **“Teaching with Technology Fair”** organized by the Centre for Teaching Support & Innovation, hosted at MADLab
- **“PrepYou” presentation** featuring the company’s founder.
- Hosted **U of T Dev Club Events** including “App Idea Fest” and tutorials for Android, iOS, git, express
- **“Book and Media Studies Social” event on 3D Printing**
- **“Software Carpentry”** - two all-day sessions at the MADLab, organized in collaboration with UTL
- Hosted the **“Get Your Bot On Orientation”** for the GYBOO community organization
- **“Introduction To Xcode” workshops**

2013

- **“Live-coding, Virtual Reality & Oculus Rift”**
- **“Introduction to JavaScript VR library”**
- **App Workshop:** “Perform Your Migration”
- Pilot of **3D object design** for 3D printing workshop
- **“Introduction to Swift and iOS programming”** organized with Institute of Health Policy, Management and Evaluation (IHPME) and delivered to students from a Toronto Priority Community
- “Introduction to Swift and iOS programming” for U of T Institute of Electrical and Electronics Engineers (IEEE) Club

2015

- **“Swift Coding”** with the UTL entrepreneurship librarian
- “MSICEdAppHack” MADLab staff participated as judge at **app-athon for TDSB students** (“Model Schools for Inner Cities”)
- **UofT Medical Innovations Club** 3D design workshop and demos
- **“3D Object Design”** workshops
- **iLightboard Demo** for MOOC Working Group
- **“Getting started with Swift, Xcode and Firebase”** for DCSIL
- **“Launchpad: Resources for Entrepreneurs”** - talk and panel about resources for entrepreneurs at U of T organized with UTL
- **“IEEE Introduction to Swift”** - two hour workshop for Engineering students (included the creation of a series of synthesizers with AudioKit)
- **Workshops for “Faculty of Information”** (3D printing, design and app development)

2016

- Special **3D printing workshop** and talk for grad students in “Digital Humanities” (in collaboration with Prof. Alexandra Bolintineanu)
- **Symposium on 3D printing and scanning** including safety training for Archeology grad students
- **Safety training** sessions for “WDW152: Order and Disorder” course
- **Design for 3D Printing In The Classroom** A guest lecture for multiple sections of OISE’s CTL7016 “Integrating Technology into the Classroom”
- **Workshop on building virtual reality apps** with “A-Frame and Web-VR” for non-programmers
- A series of 4 workshops at the MADLab based on Apple’s “App Development with Swift” course material
- **Legal Office Hours for Startups** at the MADLab organized in collaboration with the UTL Entrepreneurship

2017

LAB CO-WORKING USAGE



The MADLab offers space, support and advice to relevant U of T start-ups and app projects upon request. Among projects supported at the lab are:

- Engineering Web Dev Club
- CitoPrint Developer Group
- Connectivity
- Cuplt
- Food Hero
- Patrick Deekimcheng / Rotman Commerce Event App
- Flowcast (<https://getflowcast.com>)
- Sameboat

In addition to those projects that make use of the MADLab's physical facilities, the MADLab team provides support and advice to other U of T mobile application development projects upon request, including:

- RapidRef
- U of T Magazine App
- U of T Map
- U of T Trauma
- Best Practices in General Surgery
- CompSci Webmail
- UTM Guardians Game
- The Rouge (UTSC, The Hub)

UTL's successful collaboration with the MADLab has helped to position Gerstein Science Information Centre as a leader in academic science libraries in Canada. The extremely popular 3D printing service in the MADLab enables students and faculty across disciplines to enhance and enliven their search for knowledge through the use of technology.

Neil Romanosky

Associate Chief Librarian for Science
Research and Information

APP DEVELOPMENT & OTHER PROJECTS

I think my experience with the MADLab was that it was more than just about mobile app development. Getting a chance to test and debug the different apps was fun but part of what I expected from the job. It was cool to also get a chance to learn about the 3D printing and use the VR headset and learn about AFrame. Overall, it gave me the chance to work with a variety of technologies which was great.

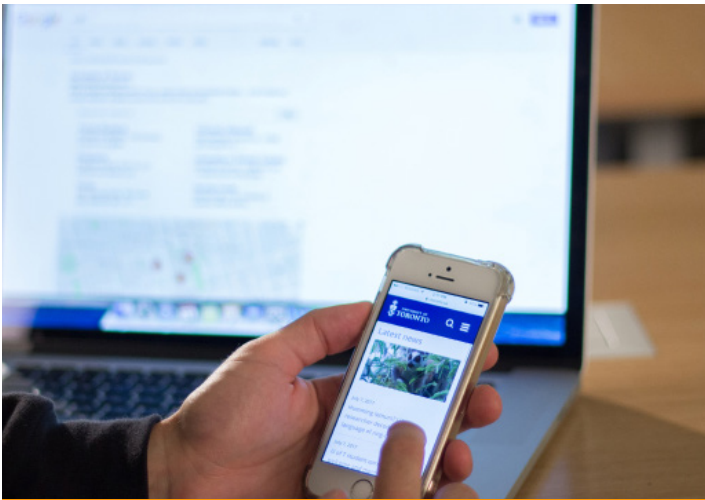
Veerpal Brar

MADLab Work Study Student, Comp. Sci (UTM)



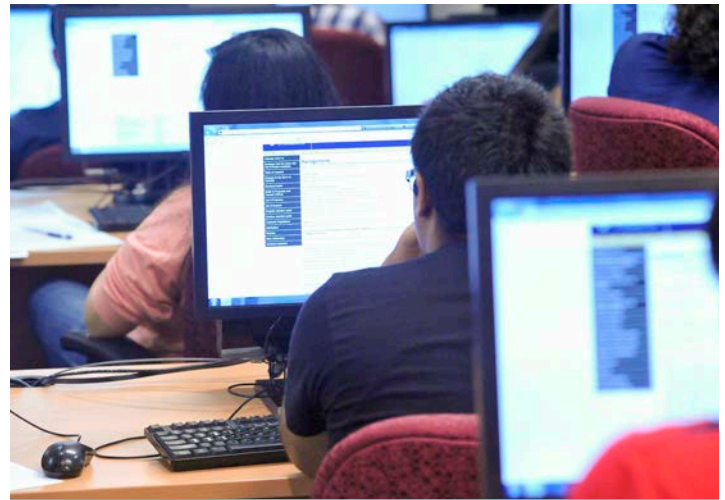
While the MADLab attempts to provide members of the U of T community with advice and support free of charge, the lab will get involved in actual development projects as staff time allows, and this includes some revenue generation activities to help offset the cost of running the lab. Thus far, the lab has generated about \$50,000 in development income building apps for clients from both inside and outside of the University. These include:

- iEEB ClassApp
- TLS - the internal app for the University's Teaching and Learning Symposium conference
- PlayThere, a Prototype AirPlay service facilitation app (currently being used at UTM)
- PerioMonitor for Dentistry
- Campus Tours, a prototype app for Student Life
- Internal app for the TechKnowFile conference (2015 & 2016)
- Pathway App (UHN - Toronto General Hospital)
- Toronto Design Offsite Official App (iOS & Android)
- QaQ Video Messaging app
- iLightboard Video Lecture Capture App
- Mobile Map for Cabinets Project - Art Installations Around Campus
- Pharmacology On The Go



Related Activities

MADLab staff have built and maintain an institutional App Distribution Server; a prototype distribution system that integrates with the University's single-sign-on UTORid authentication system.



Coursera MOOC

MADLab staff have contributed to the development of U of T's Coursera course in "Swift and iOS Development" (Prof. Parham Aarabi), including designing several learning modules and evaluations, redesign of the capstone project, and ongoing contribution to updating and maintaining course materials.

I came to MADLab with zero coding experience and through several meetings and many more emails, Michael taught me some important coding basics in order to get these projects off the ground. [He] was quick to respond to email inquiries and questions, which really helped ease any anxiety I had about these two apps and about our research projects. I can honestly say that, without his help, neither study would be launching. I am indebted to Michael and to MADLab for all their help with both of these projects!

Nadia Al-Dajani, MA
PhD Candidate Clinical Psychology



Staffing

From its inception, the MADLab has been a source of experiential learning and employment for University of Toronto students. Over the course of its first five years, the MADLab has employed 32 students through the Work Study Program or the Graduate Student Library Assistant (GSLA) Program. Student employees assist with facilities management and support, as well as with development projects. The student employees, both undergraduate and graduate students, have come from a variety of programs, including Engineering, Arts & Science, and Information Studies.

The MADLab is managed by Mike Spears, who is also a senior member of the Development Team in the Academic & Collaborative Technologies group at U of T. In addition to his facilities management and app development work, Mike has delivered workshops and guest lectures on app development, 3D printing and 3D design. Prior to working at the MADLab, Mike was a part of the Computing Services department at the Rotman School of Management. In addition to his work at U of T, Mike volunteers his time and technical expertise with the non-profit Toronto Design Offsite Festival, including authoring their official festival mobile app. Outside of work, Mike's interests include experimental music synthesis and composition, procedural image generation (and machine learning), vintage game console hacking, travel, and sailing.

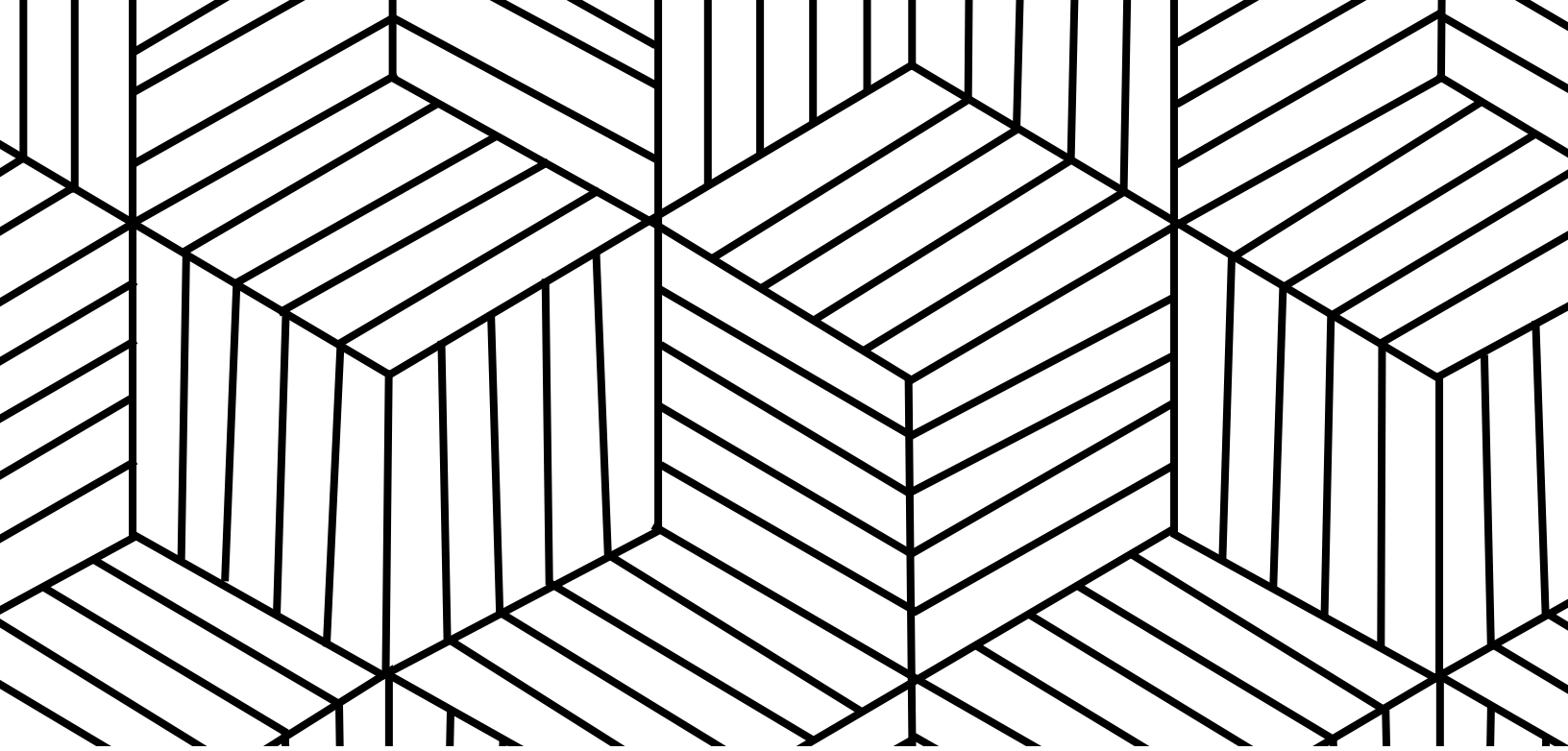
Talks by Mike Spears

- TechKnowFile - Each Year 2013-2017 - Topics included iOS App Background Updates, Apache Cordova, 3D Printing, and iLightboard
- Introduction to App Development for the Faculty of Medicine
- NSNorth - Exporting from Adobe Illustrator to Core Graphics (iOS)
- Introduction to MADLab Services and the Architecture of Mobile Apps for the Faculty of Kinesiology
- Lightning Talk on finding developers for mobile projects and planning mobile projects for the Digital Humanities Network
- Security in mobile apps for I+TS Lunch and Learn
- 3D printing in the classroom for the Ontario Institute for Studies in Education (OISE)

The MADLab is a phenomenal resource for individuals looking for support in app development. Mike helped me transform a very rudimentary prototype into a functional, visually pleasing app. His technical expertise and support through the process were instrumental in my project's success!

Fahima Dossa

General Surgery Resident at University of Toronto



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