



Dominic Canare

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A community-oriented leader with a passion for making technologies more **accessible**, **efficient**, and **effective** through the thoughtful use of **artificial intelligence**, **automation**, and data-driven **interaction design**



Education

Ph.D. Human Factors Psych

Wichita State University
May 2020 (expected)
Wichita, Kansas

M.A. Psychology

Wichita State University
May 2017
Wichita, Kansas

M.S. Computer Science

Wichita State University
May 2008
Wichita, KS

B.S. Computer Science

Pittsburg State University
May 2006
Pittsburg, KS

Publications

Canare, D., Chaparro, B., & Chaparro, A. (2018, September). Using Gesture, Gaze, and Combination Input Schemes as Alternatives to the Computer Mouse. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 62, No. 1, pp. 297-301). Sage CA: Los Angeles, CA: SAGE Publications.

Canare, D., Chaparro, B., & He, J. (2015, August). A comparison of gaze-based and gesture-based input for a point-and-click task. In *International Conference on Universal Access in Human-Computer Interaction* (pp. 15-24). Springer, Cham.

Professional Experience

Research

Developer Experience Research Intern

Intel Corporation, 2019-2019

Our Developer Experience team performed usability and user-experience research on products that targeted software developers. During my six-month contract with Intel, I contributed to several products as part of the oneAPI initiative and Intel's beta launch of the reference implementation. I worked closely with engineers, technical writers, web-professionals, and other researchers to improve the products and associated materials.

- Expert review of documentation, guides, tools, code samples, etc.
- Experiment designs & test plans
- Procured and configured hardware
- Executed and supervised test sessions
- Shared findings to various groups

Research Assistant

Wichita State University, 2016-2019

We perform a variety of scientific experiments across the spectrum of basic and applied research. Some of our research projects focus on visual perception (depth perception, stereopsis, contrast sensitivity, etc.), perceptual learning, age-related deficits in perception and cognitive functions, activities in virtual reality, and driving performance studies. I participate in all aspects of our research from conception to conclusion.

- Experiment design
- Software development (Python, Unreal Engine)
- Hardware development (Arduino)
- Writing and documentation
- Process automation

Software Development

Technology Consultant

Green Light Go, 2003-Present

I provide tech consulting and software development services for a variety of clients via contract and sub-contract work. Over the years, some of my clients have included manufacturing companies, various clinicians (physicians, orthodontists, hospitals), non-profits, and individuals.

- Freelance development
- Technology consulting
- Desktop applications
- Mobile apps (Android/iOS)
- Embedded programming
- Graphic design

Software Engineer**TimeIPS, 2007-2008**

As a developer at TimeIPS, I helped develop and maintain our primary product: a network appliance which serves as a digital time and attendance system. Our small development team worked directly with company leadership to decide, make, and implement product and technical decisions.

- Full-stack web development
- Python
- PHP
- Feature development
- SQL
- Software maintenance

Healthcare Systems**Healthcare Systems Consultant****Stoltenberg Consulting, Inc., 2011-2012**

The HITECH Act created significant incentives for healthcare providers to adopt and implement technologies which reduce errors and improve outcomes. Working directly with clinicians, IT staff, and vendors, I helped ensure that new technologies were implemented correctly to maximize their benefits and minimize the impact of the transition.

- Alameda County Med Center
- Electronic record conversions
- Design/develop CPOE systems
- Elyria Memorial Hospital
- Various system integrations
- System automation

Application Development Analyst / Applications Specialist**Via Christi Health System, 2007-2008**

As the lead analyst for the implementation of Computerized Provider Order Entry (CPOE), I worked directly with clinicians to guarantee and promote system effectiveness and patient safety. As a developer, I identified, designed, and built user interfaces, system automation rules, security settings, reports, system integrations to support clinical and administrative staff within the hospital system.

- CPOE implementation
- Automation
- Java development
- Business process management
- Systems integration

Education and Instruction**Engineering Camp Director****Wichita State University, 2014-2017**

Engineering summer camps provide youth (and inbound college freshmen) with the opportunity to explore STEM-related work with their peers through entertaining activities. Camp directors design and deliver a one-week long set of activities based on a topic of their choice.

- Scratch Programming
- Physical computing with Raspberry Pi
- Bridge for Engineering and Engineering Technology Students (BEETS)
- MIT App Inventor

Adjunct Instructor**Wichita State University, 2009-2017**

I served as an adjunct instructor for Wichita State in 2009, and again from 2013-2015. The classes I taught included computer science coursework and some experiential learning courses in engineering. These experiential courses were entirely project-based, giving the opportunity for students to collaborate on designing, prototyping, testing, and delivering projects.

- Data Structures and Algorithms
- Introduction to Engineering
- Service Learning in Engineering

Technology and Media Instructor**Upward Bound Wichita Prep, 2013-2014**

Upward Bound Wichita Prep helps low-income, disabled, and first-generation students develop their academic potential. Part of that experience includes an intensive summer residential experience where high-school students live on campus and attend classes to create a college-like experience. As an instructor for UBWP, designed and delivered courses which allowed students the opportunity to develop new technical skills while exploring creative endeavors.

- Video-game design and development
- Movie making

Community

Board member and volunteer

Bike Walk Wichita, 2015-current

Bike Walk Wichita is a 501(c)3 non-profit whose mission is to transform Wichita into a more livable, accessible, connected city by making biking and walking safe, equitable, and appealing. We achieve this through advocacy and civic engagement, education for cyclists, pedestrians, motorists, and collaboration with community partners.

- At-large board member
- Outreach volunteer
- App developer
- Communications Workgroup
- Web developer

Volunteer, activist, lobbyist

Wichita Animal Rights Group, 2015-current

Bike Walk Wichita, 2015-current

The Wichita Animal Rights group is comprised of individuals who seek to reduce the suffering experienced by all creatures. Activities include discussion groups, film festivals, vegan pot-lucks, and advocacy (leafletting, lobbying, protesting, etc.).

- Lobbying
- Event-planning and organization
- Discussion group facilitator
- Protester

Volunteer

WSU Student chapter of the HFES, 2013-current

The Wichita State University HFES Student Chapter works to promote and advance the understanding of the human factors and ergonomics involved in the design, manufacture, and use of machines, systems, environments and devices of all kinds through the interchange of knowledge and methodology in the behavioral, biological, and physical sciences and in industrial, computer science and other relevant engineering disciplines.

- STEM Outreach
- Public speaking

Cofounder, board member, volunteer

MakeICT, 2012-current

MakeICT is a 501(c)3 educational non-profit founded in 2012. We operate community makerspace in Wichita, Kansas, where members of the community can collaborate and share knowledge, ideas, tools, and equipment.

Our makerspace is an 8,700 sq ft facility which includes a woodshop, metalshop, ceramics studio, printmaking, electronics, 3d printing, laser cutting, jewelry making, and more. The classroom offers teaching space for an incredible variety of learning opportunities, and the gallery space is used to showcase works from community members.

- Co-Founder
- Social media manager
- Web developer
- President
- Outreach volunteer
- System automation
- Vice-president
- Event organizer
- Volunteer recruiter
- At-large board member
- Instructor

Donor

Wichita State University, 2011 - current

In 2011, I started a scholarship at Wichita State University to help support the advancement of higher education for local students. Additionally, I created an award for freshmen engineering students who showed significant potential to make the world a better place. The award came with a stipulation-free cash prize.

- Member: Society of 1895
- Founder: "The Dominic Canare Take a little, leave a lot" scholarship
- Founder: "The Commission to Create a Favorable Future" Award

Board member, Workshop facilitator

ThINK, 2016 - 2019

The Incubator for Non-profits of Kansas is a 501(c)3 non-profit which was created to help other non-profit initiatives start and grow their organizations. ThINK holds regular workshops which are open to the public.

- At-large board member
- Workshop facilitator
- Non-profit consultant

Treasurer**Kansas Linux Fest, 2016 - 2019**

Kansas Linux Fest is an annual event to celebrate and promote Free and Open Source software, open knowledge, and education. The event consists of a topic-driven sessions lead by volunteer presenters. Topics cover a variety of subjects.

- Event planning & organization
- Treasurer
- Social media manager

App developer**Horizontes, 2018 - 2018**

Horizontes is a community-engagement art project which aims to connect underrepresented areas in Wichita: the predominantly Latino North End and historically African American Northeast neighborhoods. The initiative is driven by local artists and was a 2017 Knight Cities Challenge winner.

- Survey app developer

Maker Faire planning committee**Wichita Mini Maker Faire, 2016 - 2017**

Maker Faire is a gathering of fascinating, curious people who enjoy learning and who love sharing what they can do. From engineers to artists to scientists to crafters, Maker Faire is a venue for these makers to show hobbies, experiments, projects. We call it the Greatest Show (& Tell) on Earth - a family-friendly showcase of invention, creativity, and resourcefulness.

- Planning committee
- Volunteer recruitment
- Exhibition curation

Coach, volunteer, donor**Miracle League of Wichita and Sports 4 All Kids, 2010 - 2015**

The Miracle League of Wichita and Sports 4 All Kids provide children with special needs the opportunity to participate in team sports and other activities. Specially designed playing fields, rules, and teams help provide an inclusive, safe, and fun experience for all players.

- Baseball coach
- Donor
- Kickball coach
- "Angel" volunteer

Individual partner classroom volunteer**Junior Achievement, 2014 - 2014**

Junior Achievement volunteers share personal and professional experiences and skills with students to help them connect what they learn in school to what they will need to succeed in work and life.

Student Organization Advisor**Wichita State University, 2012 - 2014**

Student organizations provide an opportunity for students to develop personal connections with their peers, participate in activities with like-minded individuals, build cohort relationships which help improve academic outcomes. To be recognized by the university, student organizations must have a faculty advisor who helps provide advice, guidance, mentorship, and oversight to the organizations and their leaderships.

- Nerd Union
- Association for Computing Machinery
- Robotics Implementation Group

App developer**CreativeRush, 2013 - 2013**

CreativeRush works to connect creatives with each other and the larger community. By bringing together a diverse group of people with different talents, interests, and ideas, CreativeRush helps us learn more and do better work.

- Membership app developer

Awards and Grants

2019 Epic MegaGrant Winner for PsydeKick**Epic Games, October 20, 2019**

Epic Games established MegaGrants to support people and organizations creating with their products and/or enhancing open-source capabilities for the 3D graphics community. This grant provides seed funding (capital and operational costs) for the development of the PsydeKick Science Kit, an open-source framework to help scientists and researchers build rich, interactive experiments that work across multiple platforms and without requiring them to be software developers.

2019 Jayne and Glenn Milburn Fellowship**Wichita State University Graduate School, April 29, 2019**

The Jayne and Glenn Milburn Fellowship is presented to graduate students in recognition of exceptional performance and achievement. I received this award in its inaugural year as acknowledgment for contributions and support of the graduate school and the university.

2019 Charles G. Halcomb Award**Wichita State University Dept. of Psychology, April 16, 2019**

The Charles G. Halcomb Award is named for Dr. Halcomb, Professor Emeritus at Wichita State University who established the Human Factors program there. This award is given annually to one student for "Outstanding Research in Human Factors Psychology". I won this award in 2019 for my work on QuickCSF, an open-source implementation of the qCSF algorithm. It's a fast, adaptive approach to estimating an observer's complete contrast sensitivity function. The source code is publicly available for researchers, clinicians, and anyone else to download, use, improve upon, and share further.

2017 Randall Chambers Award Winner**Wichita State University Dept. of Psychology, November 30, 2017**

Dr. Randall Chambers was a distinguished professor at WSU and Chief Life Scientist for NASA. He made a number of significant contributions to the field, and this award was created in his honor. Finalists present data and findings from recently completed research to an audience and a panel of judges who select one winner. My presentation featured work from my masters thesis in Human Factors and was the winning presentation in 2017.

2017 GRASP Honorable Mention**Wichita State University Graduate School, April 27, 2017**

The Graduate Research and Scholarly Projects (GRASP) Symposium is an annual event where graduate students can share their work with the rest of the university and the wider local community. Judges score presentations on the strength and content of research, visual design and organization, and presentation communication and effectiveness. My presentation on New Input Schemes for New Devices received an Honorable Mention and a cash prize.

2015 Bright Future Award**WSU Ventures, November 15, 2015**

WSU Ventures holds an annual awards event to recognize innovative faculty, staff, students, and industry partners with ties to Wichita State. I was selected as one of eight students to receive the Bright Future Award in its inaugural year.

2015 Newsmaker of the Year**Wichita Business Journal, February 2, 2015**

The Wichita Business Journal recognizes Wichita-area business leaders who have made newsworthy differences in the community. I was recognized by the WBJ primarily for work I did with MakeICT. Other NewsMakers that year included the mayor, the president of Wichita State University, and others.

2014 Knight Foundation Fund Grant (\$100,000)**Wichita Community Foundation, November 23, 2014**

Following their initial grant, the Wichita Community Foundation later awarded \$100,000 MakeICT. The funds were used to seed an 8,700 sq foot community makerspace. Capital purchases included equipment for a woodshop, metalshop, ceramics studio, electronics, lab, screen printing studio, textiles studio, "fab lab" (laser cutter, 3d printers, etc.), and more. The funding also covered some initial operating expenses (rent, utilities, insurance, etc).

The MakeICT makerspace is now fully self-sufficient through membership dues and donations.

Additionally, it has served as a fiscal sponsor and incubator for spin-off nonprofits with similar missions.

2014 Infrastructure and Sustainability Grant (\$17,220)**Wichita Community Foundation, June 16, 2014**

With funding provided by the Knight Foundation Fund, the Wichita Community foundation awarded \$17,220 to our non-profit, MakeICT. The funding was used to cover a number of short-term operational expenses while leadership explored growth opportunities and developed a sustainability plan.

2006 Outstanding Senior of the Year

Pittsburg State University Dept. of Computer Science, April 30, 2006

One student is selected each year for recognition of outstanding academic achievement.