

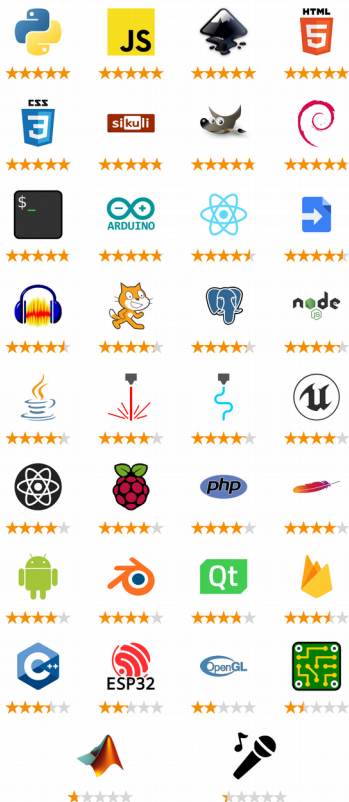


Dominic Canare

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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.S. Computer Science

Wichita State University
May 2008
Wichita, KS

M.A. Psychology

Wichita State University
May 2017
Wichita, Kansas

B.S. Computer Science

Pittsburg State University
May 2006
Pittsburg, KS

Professional Experience

Research

Research Assistant

Wichita State University / VPC Lab, 2016-Present

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+automation 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 technology 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, utility companies, various clinicians (physicians, orthodontists, hospitals), non-profits, and individuals.

- Freelance development & consulting
- Desktop applications
- Mobile apps (Android/iOS)
- Web sites and apps
- Embedded programming
- Graphic design

Software Engineer

TimeIPS, 2007-2008

At TimeIPS, I developed and maintained our primary product: a network appliance 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
- PHP, SQL, Python, HTML, JS, CSS
- Feature development
- 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 ensured that new technologies were implemented effectively to maximize benefits and minimize the impact of the transition.

- Alameda County Medical Center
- Elyria Memorial Hospital
- EMR Conversions
- System integrations
- CPOE implementations
- Automation and workflow management

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

Teaching and Instruction

Engineering Camp Director

Wichita State University / College of Engineering, 2014-2017

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

- Scratch Programming
- MIT App Inventor
- Physical computing with Raspberry Pi
- Freshmen transition to college camp

Adjunct Instructor

Wichita State University / College of Engineering, 2009-2017

I taught as an adjunct instructor for Wichita State in 2009, and again from 2013-2015. My courses included computer science and experiential learning courses in engineering. Experiential courses are entirely project-based, giving students the opportunity 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, I 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

Graduate Teaching Assistant

Wichita State University / College of Engineering, 2006-2008

While pursuing my MS in Computer Science, I taught a few courses and labs where I had the opportunity to lecture, tutor, and mentor other students.

- Assembly Language Programming
- Object-oriented Programming
- Introduction to Unix

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.

Awards and Grants

2019 Charles G. Halcomb Award

Wichita State University, April 17, 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

Wichita State University Department 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 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 local 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 of Wichita, the president of Wichita State University, and others.

2014 Knight Foundation Fund Grant (\$100,000)

Wichita Community Foundation, November 23, 2014

Following an initial grant, the Wichita Community Foundation awarded an additional \$100,000 to 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). MakeICT 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.

Community Involvement

Co-founder, Board Member, Volunteer

MakeICT, 2012-current

MakeICT is a 501(c)3 educational nonprofit operating a community makerspace in Wichita, Kansas. Here, people collaborate and share knowledge, ideas, tools, and equipment. Our makerspace is an 8,700 sq ft facility which includes a classroom, showroom, woodshop, metalshop, ceramics studio, printmaking, electronics, 3d printing, laser cutting, jewelry making, and more.

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

Board Member and Volunteer

Bike Walk Wichita, 2015-current

Bike Walk Wichita is a 501(c)3 nonprofit 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
- Communications Workgroup
- Outreach volunteer
- Web developer
- App developer

Volunteer, Activist, Lobbyist

Wichita Animal Rights Group, 2015-current

Bike Walk Wichita, 2015-current

The Wichita Animal Rights group seeks to reduce suffering experienced by all creatures. Activities include discussion groups, film festivals, vegan pot-lucks, and advocacy (leafleting, lobbying, protesting, etc.).

- Lobbyist
- Event planner
- Discussion Group Facilitator
- Protester
- Outreach

Volunteer

WSU Student Chapter of the HFES, 2013-current

The Wichita State University Student Chapter of the Human Factors and Ergonomics Society works to promote the field of human factors, and to create camaraderie and community between students, faculty, researchers, practitioners, and community members.

- STEM Outreach Activities
- Public speaking

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.

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

Board Member, Workshop Facilitator**The Incubator for Nonprofits of Kansas, 2016-2019**

The Incubator for Nonprofits of Kansas (ThINK) is itself a 501(c)3 nonprofit which helps other nonprofit 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 topic-driven sessions on a variety of subjects lead by industry leaders and volunteer presenters.

- Event planning & organization
- Treasurer
- Social media manager

Technical Consultant and 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.

- Data collection consulting
- 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 love sharing what they can do. From engineers to artists, scientists, crafters, and more, Maker Faire is a venue for these makers to share their projects. It's 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 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, and build cohort relationships which help improve academic outcomes. For official status, organizations must have a faculty advisor who provides advice, guidance, mentorship, and oversight to the organizations and their leaderships.

- Nerd Union
- Assoc. for Computing Machinery
- Robotics Implementation Group

App Developer**CreativeRush, 2013-2013**

CreativeRush connects creatives with each other and with 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
- Tech consulting