

# Caroline D. Hardin

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Teacher Education Building  
Room 128b  
225 North Mills Street  
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## 1 Formal Education

### Ph.D student in Computer Science Education

University of Wisconsin-Madison, Madison, WI - 2015–present

- Advisors: Matthew Berland and Mike Swift

### M.S. in Curriculum & Instruction

University of Wisconsin-Madison, Madison, WI - 2015

- Thesis: Learning to program using online forums - A comparison of links posted on Reddit and Stack Overflow
- Advisor: Matthew Berland

### B.S. in Computer Science

University of Wisconsin-Madison, Madison, WI - 2004

## 2 Teaching Experience

### Legitimate Strategies LLC

Co-founder, Madison, WI - 2017–present

- Provide technical training, private CS tutoring, and custom STEM outreach workshops.
- Build interactive e-textile exhibits for Madison Science Museum

### Teaching Assistant

University of Wisconsin - Madison, Madison, WI - 2016–2017

- Plan and lead 75 minute classes on 'Video Games and Learning'.
- Advise 40 students a semester.
- Utilize Canvas and Desire to Learn to provide instructional support for students.
- Grade 40+ pages of composition writing per student

## **Technology Trainer**

Freelance, Madison, WI - 2016–2017

- Designed custom curriculum on Google suite for a non-profit.

## **Microsoft Student Partner**

Microsoft, Madison, WI - 2016–2017

- Organize monthly technical workshops for UW Madison students on a variety of topics, including games, cryptography, information security, electronics, and web design.

## **Computer Science Tutor**

University of Wisconsin - Madison, Madison, WI - 2016–2017

- Assist students in computer science classes with code and theoretical concepts.

## **Computer Science Workshop Designer**

University of Wisconsin - Madison, Madison, WI - 2016–present

- Collaborating with a team to design and lead a MIT App Inventor workshop for to encourage freshmen from under represented groups to major in computer science.

## **Adjunct Instructor of Information Technology**

ITT Technical Institute, Madison, WI - 2011

- Taught Linux System Administration, Windows 7, and Introduction to the PC (hardware tech support).

## **Program Chair of Information Technology**

Globe University East, Madison, WI - 2010–2011

- Taught a variety of IT courses, including Operating Systems, Introduction to Computer Literacy, Microsoft Office, and Keyboarding
- Provided programmatic support for students and faculty with training, advising, recruitment, and hiring.
- Developed and maintained facility and curriculum resources, including a Blackboard implementation.
- Organized and led community workshops.

## **Peace Corps Information and Communication Technology (ICT) Teacher Volunteer**

Peace Corps Ghana, Nalerigu, Ghana; Mampong, Ghana - 2007–2010

- Creatively used limited resources to teach hands-on skills and theory to over 850 high school students, 200 elementary students, and 220 adults. Class sizes ranged from 4 to 70 students.
- Set up, administered and designed curriculum for one of the first networked dual boot Ubuntu Linux/Windows XP labs in Ghana.
- Mentored 5 high-school and university teachers with lesson planning and instructional design.
- Trained dozens of academic staff members in basic computer skills, hardware repair, software installations, and lab administration.
- Coordinated and produced student cultural dance and HIV/AIDS educational video projects.
- Helped organize the website, served as a group leader, and taught ICT at 3 annual week-long STARS (Students Taking Action Reaching For Success) high-school conferences.
- Created, promoted and distributed the ICT Resource CD for ICT teachers and students, which contained a full range of culturally appropriate instructional materials including lesson plans, exams, textbooks, educational open source software, and classroom technology tips.
- Coordinated the ICT Think-Tank: representing over 140 volunteers, this committee worked on dozens of cutting-edge technology projects, including designing and creating informational websites, writing educational computer lab manuals, and developing the Library Linux operating system.
- Organized and led the ICT technical training for incoming volunteers at numerous workshops and conferences.
- Organized and led four clubs (Staff Ubuntu Linux Club, Elective ICT Club, Websites and Internet Club, and the Middle School Girls Club) and coordinated projects with an HIV/AIDS club.

## **ESL Computer Tutor Volunteer**

Minnesota Literacy Council, Minneapolis, MN - 2006–2007

- Tutored ESL adults in basic computer skills.

## **3 Relevant Work Experience**

### **TEALS Technology Education And Literacy In Schools**

Wisconsin Regional Manager, Madison, WI - 2017–present

- Recruit, train, and support tech industry volunteers to team-teach high school CS classes.
- Train and support classroom teachers as they learn computer science content.

- Organize student outreach and enrichment opportunities, including internships and field trips.
- Build regional communities of practice around computer science education through events, trainings, social media, and resource curation.

## **Games + Learning + Society**

Conference Co-Chair, Madison, WI - 2015–2016

- Recruited and supervised other conference staff.
- Managed the conference web site and conference registration.
- Recruited conference speakers.
- Created and managed a six-figure budget.
- Performed project management for an event of 500+ attendees.

## **Instructional Technology and Communication Assistant**

DoIT Academic Technology, University of Wisconsin at Madison, Madison, WI - 2013–2015

- Developed in JavaScript, CSS and HTML for augmented reality platforms ARIS and SIFTR.
- Assist faculty in using technology in instructional design.
- Provided technical assistance and training to faculty and staff in Moodle and Desire to Learn.
- Supported faculty and staff with academic technology issues.
- Provided technical support and forum moderation for a MOOC with over 40,000 users.
- Designed games and new user trainings for ARIS.
- Resolved technical issues for users of Case Scenario/Critical Reader digital narrative tool.

## **Director of Religious Education**

James Reeb Unitarian Universalist Congregation, Madison, WI - 2011–2014

- Recruited, trained, and supervised over 20 volunteer teachers each semester.
- Coordinated inspiring and meaningful curriculum activities across 5 classrooms (ages 0–18).
- Organized community building workshops, fairs and events.
- Created and maintained digital pedagogy support and communication tools.

## **Technical Support Coordinator**

United Cerebral Palsy of Greater Dane County, Madison, WI - 2012–2013

- Administered Windows Server 2008, Exchange 2010, anti-virus, security, and backup systems.
- Provided technical support and training for over 65 Windows and iPad users.
- Developed organization-wide technology strategy to take advantage of new digital tools.

## **Information Support Specialist**

McQuay International, Minneapolis, MN - 2005–2006

- Programmed in FoxPro to improve and support a legacy order entry system processing over 1 million dollars in orders a day.
- Provided phone and email based training and troubleshooting for international sales reps and engineers.
- Created a new documentation database with tutorial documents for three major systems.

## **Programmer, Web Developer and System Administrator**

Center for Demography in Health and Aging, Madison, WI - 2002–2005

- Administered the OLDR (Off-line Longitudinal Data Repository) Red Hat Linux system.
- Developed CDHA's website using HTML, CSS, DreamWeaver and Photoshop.
- Designed PHP forms with dynamically linked ASP and SQL databases.
- Wrote extensive documentation for the IT systems and protocols.

## **4 Peer-Reviewed Conference Proceedings**

### **A sociocultural analysis of digital privacy curricula**

AERA, New York, NY - 2018

### **Using Embodied Cognition to Teach Open Source Software**

FABLEARN, Stanford, CA - 2016

### **Reddit /r/learnprogramming VS StackOverflow**

SIGCSE - Special Interest Group Computer Science Education, Memphis, TN - 2016

## **5 Conference Presentations**

### **Getting Started with Electronic Textiles**

Connected Learning Summit, MIT Media Lab, MA - 2018 (forthcoming)

## **Education Panel**

Hackers, Santa Cruz, CA - 2017

## **E-Textiles in Education**

Hackers, Santa Cruz, CA - 2017

## **BrickOpenCode: Learning about software licenses with LEGOs and Scratch**

DEFCON R00TZ, Las Vegas, NV - 2016

## **An argument for applying educational theory to computer science education**

Hackers, Santa Cruz, CA - 2016

## **Brick in the Wall vs. Hole in the Wall: Education for hackers and hacking education**

BSides Las Vegas, Las Vegas, NV - 2014

## **Free and Open Source Software in School Communities**

Open Source Systems Conference, Hammamet, Tunisia - 2012

## **Free as in Freedom: the vision of open source software in education**

Software Freedom Day, Monastir, Tunisia - 2012

## **Using Technology in the Ghanaian Classroom**

BarCamp Ghana, Accra, Ghana - 2009

## **The Promise and Potential of Open Source Software in Education**

Free and Open Source Software Day, Accra, Ghana - 2009

## **6 Book Chapters**

### **References**

Caroline D. Hardin. *A Day on the Planet*, chapter A Day as a Computer Teacher in Ghana. Engelsdorfer Verlag, Leipzig, 2010.

Caroline D. Hardin. *Free and Open Source Software and Technology for Sustainable Development*, chapter Free and Open Source Software in School Communities: An Experience Report from Peace Corps Volunteers in Ghana. United Nations University Press, Tokyo, 2012.

## **7 Research Groups**

### **Complex Play Lab**

University of Wisconsin - Madison, Madison, WI - 2014–present

## **8 Service Activities**

### **Board Member**

Danenet - 2017 – ongoing

- Advise on technology initiatives

### **Chair of Education Committee**

Bodgery Makerspace, Madison, WI - 2016–2017

- Recruit local technology experts and artists to run workshops. Facilitate and support educational outreach efforts. In addition, teach classes in e-textiles, software licenses and privacy.

### **Director**

MadHacks - 2016 – 2017

- Lead 20+ member student hackathon to organize quarterly technology events of up to 350 students. <https://www.madhacks.org/>

### **Electronic Textiles Volunteer Instructor**

Madison Children's Museum, Madison, WI - 2015

- Designed, coordinated and taught a workshop on electronic textiles for middle school girls. <http://madisonchildrensmuseum.org/event/digi-design/>

### **Saturday Science presenter**

Wisconsin Institute for Discovery, Madison, WI - 2016

- Designed and presented a hands-on e-textile table which included opportunities to program a LilyPad Arduino Proto-Snap development board with custom example code. Designed the tutorial packets and 'taking it home' resources.

### **BSides Las Vegas Volunteer**

Las Vegas, NV - 2015–present

- Assist with first time information technology speakers with the finishing touches of their presentations at Proving Ground

## **Game Design and Code Club volunteer**

Wingra School, Madison, WI - 2015–2016

- Guide elementary school students in creating games with Scratch, Scratch Jr., Game Star Mechanic, and Google Sketchup in a weekly Game Design and Code after school club.

## **Tech Presenter**

Expanding Your Horizons, Madison, WI - 2015 & 2016

- Worked with UW Professor Deb Deppeler to design a 1 hour 'Introduction to C Programming with E-Textiles' program for middle school girls. Final product included 4 sets of code with tutorial packets for the girls to explore different aspects of circuits, electronics and C programming, which are available under Creative Commons license

## **Hour of Code Volunteer**

We Think Big, Inc., Madison, WI - 2015

- Helped local teachers explore computer programming at an Hour of Code event.

## **Wisconsin Science Festival Outreach Volunteer**

UW-Madison WACM (Women of Association for Computing Machinery), Madison, WI - 2015

- Taught the basics of binary numbers to children and parent attendees of the Wisconsin Science Festival, and assisted them in creating bracelets which used beads to represent their birthdays and initials in binary.

## **Women and Identity in Gaming Symposium Invited Panelist**

Lawrence University, Appleton, WI - 2015

- Discussed the research around women's identity in game development and other technology fields.

## **Woman's Hackathon Coordinator**

University of Wisconsin-Madison - 2014

- Co-organized the 2014 International Woman's Hackathon at UW-Madison, including event planning, recruiting judges and mentors, soliciting donations, graphic design, and advertising.

## **Games Learning Society 2014 Conference Awards Designer**

Learning Games Network - 2014

- Designed and created the Showcase awards for the GLS 2014 conference. The 4 award sizes were designed in 3D Lego modeling software, then the 2,000 custom selected LEGOs were purchased from 10 different international vendors to conform to budget and schedule constraints. A team of volunteers was guided in assembling the awards.



## **Women's Designathon Organizer**

Doyenne Group, Madison, WI - 2013

- Led organization and vision setting for this hackathon style 2-day event, including participating in fund-raising, mentor recruitment, advertising, graphic design, and participant recruitment.

## **Volunteer Coordinator of Educational Technology**

Sector67, Madison, WI - 2012

- Organized and taught courses on technology topics, including Linux, Java, and Technology for Students.

## **Database Design Volunteer**

Grassroots Leadership College, Madison, WI - 2010–2012

- Re-designed FileMaker databases for conversion to CiviCRM; recovered data with Pentaho.
- Led a committee of IT volunteers in setting a new IT vision.
- Troubleshoot general office technology issues and provided various tech trainings.

## **9 Awards and Honors**

- Placed 2nd at the 2016 SIGCSE Student Research Competition for a poster and presentation on how people learn programming through links posted on Reddit and Stack Overflow.
- Awarded 'Best Theme' at the Convergence 2016 costume masquerade for a 'Magic Carpet' costume, which incorporated a LilyPad Arduino with NeoPixels and a matching Gemma-powered magic lantern.
- Placed 2nd at the 2014 Madworks Cryptocurrency Hackathon for a digital badge based game for Bitcoin.

## **10 Grants and Travel Awards**

- Grace Hopper
- BSides Proving Ground
- Microsoft Research E-Textiles Grant