Aubrey Birdwell (rotate your phone to view)

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research interests

Designing interactive real-time programming languages and tools for the live performance of computers and cyber-physical systems **–** Applying machine learning and data science for constructing narratives **–** The history and intersection of algorithms and social theory.

awards

2022   Weinman-Heavin Endowed Scholarship
2021   Microsoft Alumni Scholarship
2021   Evergreen Foundation Scholarship
2016   Washington NASA Space Grant
2016   NSF grant funds recipient

education

Bachelor's of Arts and Sciences Dual degree 2023
emphases in Computer Science and Mathematics
The Evergreen State College
(post bachelor's studies through spring 2023)

Coursework included: group theory, ring theory, galois theory, graph theory, formal language theory, machine learning, reinforcement learning, comparative programming languages, functional programming, functional algorithm design, purely functional data structures, parallel and distributed programming, data structures and algorithms, advanced electronics in music, audio signal processing in c

research experience

Researcher / Developer in Cybersecurity Education 2020 - present
The Evergreen State College, Olympia, WA

- ITICSE - 2023: Innovation and Technology in Computer Science Education
  Submitted paper: machine learning, data science, CS education
- CCSC-NW - 2021: Consortium for Computing Sciences in Colleges
  Presented research: visualization of cybersecurity exercise data

Researcher in Dependable Systems and Correctness 2021 - present
Lewis and Clark College, Portland, OR (remote collaborator)

- [SEL4 summit 2022](): secure micro-kernel development conference.
  Presented research: proving correctness of network stack.
- Developed semantic models of internet protocol stack
- Worked on implementing IP stack for SEL4 kernel

Researcher in Physics 2015-2016
Seattle Central College, Seattle, WA

- Built compact torsion Pendulum experiment

professional development

- Conference attendee: [The Joint Mathematical Meetings 2022]()
- Conference attendee: [Mathematical Association of America NW regional 2022]()
- Computer science club: The Evergreen State College 2020-2022
- PRCCDC 2021: Pacific Rim [National Collegiate Cyber Defence Competition]()
  Competed as a blue team member in a cyber security competition.
- Tenure Review Board Member (student reviewer): Seattle Central College 2015-2016

professional experience

Product Designer / Project Manager 2010 - present
Davis Sign Co, Seattle, WA

- Work on sensitive product designs
- Vetted contractor for a broad selection of government clients
- Specialist in design and fabrication processes for electronics enclosures
- Contributed as product development lead on several patent applications
- CNC operator (Trotec laser both fiber and Co2, Gerber router)
- Install UL compliant wiring schemes for a variety of applications
- Install wireless and IP power control systems, IP cameras
- Specialist in plastics and non-ferrous metal fabrication

Design Engineer / Fabricator 2018 - present
[Gary Hill Studios]() - Seattle, Wa

- Design engineer large scale works for museum exhibitions
- Design fabrication processes for complex plastic sculptures
- Fabricate high quality multi-material objects for exhibitions
- Install electronics for multi-camera video systems
- Install microcontroller operated video systems

Technician (volunteer) 2018 - 2020
[CoCa Art Gallery](#) - Seattle, Wa

- Installed art exhibits, and fabricated signs and displays as needed
- Handled audio-video system for auctions and special events
- Provided technical support for electronic art exhibits
- Curatorial board member

Physics lab Technician 2015 - 2016
Seattle Central College - Seattle, Wa

- Set up and managed labs for college physics classes
- Performed sensor/instrument calibrations
- Repaired physics lab equipment
- Maintained small machine shop

artist resume

residencies

05 / 2011	Seattle Storefronts Residency	Seattle, WA
09 / 2009	Implied Violence Residency	Governor's Island, NY

awards

2018	City of Seattle Public Art Boot Camp

related experience

2008-present	New Mystics	curator / artist member
2009-2011	Implied Violence	performer
2011	Saint Genet	performer

exhibitions

09 / 2020	The Space That Remains	The Building, Seattle, WA
08 / 2019	Island Wilderness	Harbor Island, Seattle, WA
06 / 2019	Island Air - as artist	Harbor Island, Seattle, WA
05 / 2018	Artist Members Group Show	CoCA Gallery, Seattle, WA
04 / 2018	Natural Movement 2.0	Nord Alley, Seattle, WA
03 / 2018	(in)habit	arteast gallery, Issaquah, WA
08 / 2017	New Mystics: Yenom Wen	CoCa gallery, Seattle
02 / 2017	Proposed Land Use	Vermillion gallery, Seattle, WA
10 / 2014	New Mystics: SECRET/SACRED	Hedreen Gallery, Seattle, WA
06 / 2014	Natural Movement	Nord Alley, Seattle, WA
01 / 2014	Distillations & Crystallizations	M Rosetta Hunter, Seattle, WA
10 / 2012	New Mystics: Art Da$h 4 Cash	City Arts Festival, Seattle, WA
05 / 2012	New Mystics: MYTH & MURDER	Vermillion Gallery, Seattle, WA

05 / 2011	Dark Days at Dark Arts	Academy of Dark Arts, Seattle, WA
04 / 2011	New Mystics: No Masterpieces	Academy of Dark Arts, Seattle, WA
10 / 2010	Catch & Release	Punctuation Gallery, Seattle, WA
07 / 2009	Three Pairs of Pants…	Ohge LTD Gallery, Seattle, WA
02 / 2009	Labyrinthe	Lampe-Tempête, Paris, France
07 / 2008	Theatrum Mundi	Lampe-Tempête, Paris, France
11 / 2007	The Belmont: *a funeral.*	The Belmont, Seattle, WA

Performance

10 / 2011	Saint Genet: Transports of Delirium	Lawrimore Project Gallery, Seattle, WA
10 / 2010	Implied Violence: Yes and More and Yes and Why	
		–Frye Art Museum, Seattle, WA
09 / 2009	Implied Violence: *The Dorothy K*	New Island Festival, Gov. Island NY, NY
10 / 2009	Fjahma Film Screening	Northwest Film Forum, Seattle, WA
08 / 2008	Implied Violence: *Barley Girl*	911 Aloha, Seattle, WA
09 / 2005	With Daniel Roumain	Time Based Arts festival, Portland, OR
2004	Language of the Circus	(e)nteractive Language Festival, Portland
2004	Cicuri Curajul	Crystal Ballroom, Portland, OR