

# BRETT WORTZMAN

CURRICULUM VITAE

EMAIL: [BRETTWO@CS.WASHINGTON.EDU](mailto:BRETTWO@CS.WASHINGTON.EDU)

## TEACHING INTERESTS

Interest in a range of lower-division computer science courses, with a particular emphasis on introductory courses (CS1/2) and courses related to computer science education. Primary experience with CS1 and computer science pedagogy.

## EDUCATION

M.S. (COMPUTER SCIENCE), UNIVERSITY OF WASHINGTON — IN PROGRESS

Enrolled in Professional Master's Program.

M.ED. (CURRICULUM AND INSTRUCTION), UNIVERSITY OF WASHINGTON — 2012

Authored thesis entitled "Addressing Enrollment, Diversity, and Access Issues in K-12 Computer Science Education."

B.A. (COMPUTER SCIENCE), HARVARD UNIVERSITY — 2006

Authored honors thesis entitled "Isolating Impurities in Functional Languages"

## TEACHING EXPERIENCE (ALL AT UNIVERSITY OF WASHINGTON)

CSE 492T: EQUITABLE AND INCLUSIVE COMPUTER SCIENCE PEDAGOGY

*Autumn 2020, Spring 2021*

CSE 143: COMPUTER PROGRAMMING II

*Winter 2021*

CSE 142: COMPUTER PROGRAMMING I

*Spring 2018, Summer 2018, Autumn 2018, Spring 2019, Autumn 2019, Winter 2020, Autumn 2020*

CSE 391: SYSTEM AND SOFTWARE TOOLS

*Autumn 2018, Winter 2018, Spring 2019, Summer 2019*

CSE 341: PROGRAMMING LANGUAGES

*Summer 2019, Spring 2020*

CSE 390 HA: HONORS SEMINAR FOR CSE 142

*Winter 2018, Spring 2018, Winter 2019, Spring 2019, Winter 2020*

CSE 143X: COMPUTER PROGRAMMING I & II (ACCELERATED)

*Autumn 2017*

## PROFESSIONAL EXPERIENCE

### ASSISTANT TEACHING PROFESSOR, UNIVERSITY OF WASHINGTON, SEATTLE, WA

*September 2017 – Present*

- Teach a variety of courses (see above).
- Manage and mentor up to 50 undergraduate TAs in course administration, teaching techniques, and student support.
- Nominated for Distinguished Teaching Award in Autumn 2018.

### INSTRUCTION AND TRAINING MANAGER, TEALS, REDMOND, WA

*May 2016 – September 2017*

- Developed, maintained, and led implementation of training curricula for volunteers and partner classroom teachers on curriculum, pedagogy, and classroom practices in AP Computer Science A, AP Computer Science Principles, and Introduction to Computer Science.
- Supported ~20 regional managers in ensuring over 300 partner classrooms are effective and providing positive student experiences.
- Attended and presented at national-level conferences on computer science education and general education.

### COMPUTER SCIENCE AND MATH TEACHER, ISSAQUAH HIGH SCHOOL, ISSAQUAH, WA

*August 2010 – June 2016*

- Taught Introduction to Computer Science (Snap!), AP Computer Science A (Java), Advanced Computer Science Topics/Projects (variety of languages/tools), Web Design (HTML/CSS), Algebra I, and Algebra II.

### MASTER TEACHER/VOLUNTEER TRAINER/CURRICULUM DEVELOPER, TEALS, REDMOND, WA

*June 2010 – May 2016*

- Assisted with new volunteer summer training in TEALS curricula, the AP Computer Science A case study and exam, teaching techniques, and classroom management.
- Developed curriculum map for AP Computer Science A; acted as lead curriculum developer for Intro. to Computer Science.

### SESSIONAL LECTURER/HEAD TEACHING ASSISTANT, UNIVERSITY OF WASHINGTON, SEATTLE, WA

*April 2011 – August 2011*

- Taught CSE 142: *Computer Programming I* using Java.

### SOFTWARE DEVELOPMENT ENGINEER, MICROSOFT CORPORATION, REDMOND, WA

*Summer 2005 (Intern), September 2006 – July 2010*

- Member of team responsible for developing code analysis tools and features in Microsoft Visual Studio.

## PROFESSIONAL ORGANIZATIONS

- Association for Computing Machinery (ACM)
  - Special Interest Group for Computer Science Education (SIGCSE)
- Computer Science Teachers Association (CSTA)
  - Puget Sound Computer Science Teachers Association (PSCSTA)

## SERVICE

- Leading review of introductory courses and design and implementation of new three-quarter sequence (2020 – present)
- Leading program development of CS4Teachers (2020 – present)
- Led development of Equitable and Inclusive Computer Science Pedagogy seminar (2020 – present)
- Undergraduate Curriculum Committee member (2019 – present)
- Undergraduate Admissions Committee member (2020 – present)
- ACM Faculty Advisor (2018 – present)
- AP Computer Science A review session coordinator and presenter (2018 – present)
- Allen School General TA Training co-coordinator (summer 2020, spring 2021, summer 2021)
- SIGCSE technical symposium undergraduate research poster competition judge (2021)
- Submission reviewer for SIGCSE technical symposium (2019 – 2020)
- Undergraduate Scholarship Committee member (2019 – 2020)
- Submission reviewer for CSTA conference (2018)

## PROFESSIONAL DEVELOPMENT

- Mid-quarter assessment from Office for the Advancement of Engineering Teaching & Learning (ET&L) (spring 2019, autumn 2019, winter 2020, autumn 2020, winter 2021)
- Participated in and assisted with coordinating CS Education Seminar (2018 – present)
- Participated in Consortium for Advancement of Undergraduate STEM Education research project (2018 – 2020)
- Attended and presented at SIGCSE Technical Symposium (2017 – present)
  - Attended pre-symposium workshop on Peer Teaching (2019)
- Participated in University of Virginia Tapestry Workshop (summer 2017)
- Attended and presented at CSTA Conference (2016 – 2017)

## HONORS AND AWARDS

- University of Washington Distinguished Teaching Award for Innovation with Technology – Nominee (Autumn 2020)
- University of Washington Distinguished Teaching Award – Nominee (Autumn 2018)
- Paul G. Allen School of Computer Science & Engineering Inspirational Teacher (2016, 2018)

## PUBLICATIONS

- Jayne Everson, Leah Perlmutter, Ken Yasuhara, Kevin Lin, and Brett Wortzman (2021). Implementation of Mastery Grading Toward Rightful Presence. UW Teaching and Learning Symposium. <https://uw.manifoldapp.org/projects/2021-teaching-learning-symposium/resource/mastery-grading>.
- Matt Davidson, Brett Wortzman, Amy J. Ko (2021). Investigating Item Bias in a CS1 exam with Differential Item Functioning. *ACM Technical Symposium on Computer Science Education (SIGCSE), Research Track*, 1142-1148. <https://doi.org/10.1145/3408877.3432397>.
- Alannah Oleson, Brett Wortzman, Amy J. Ko (2020). On the Role of Design in K-12 Computing Education. *ACM Transactions on Computing Education*, Article 2. <https://doi.org/10.1145/3427594>.

## EXTRACURRICULAR ACTIVITIES AND SERVICE

- Volunteer (Master of Ceremonies) for FIRST Robotics Competition World Championship (2017 – present)
- Key volunteer (Master of Ceremonies, Game Announcer, Robot Inspector, Referee, Judge) for Pacific Northwest FIRST Robotics Competition and FIRST Tech Challenge (2014 – present)
- Planning Committee member; Programming Contest Committee member, problem packet lead, judge coordinator, and contest lead for PSCSTA (2013 – present)
- Member, Board Member (2015 – 2021), and Vice President (2019 – 2021) of Pacific Northwest Football Officials Association (2010 – present)

- Faculty Advisor for the Issaquah High School FIRST Robotics Competition team, FRC 1318 (2012 – 2016)
- Summer Camp Instructor for University of Washington DawgBytes program (2013 – 2015)
- Reader for AP Computer Science A exam (2014, invited but unable to attend 2015 – 2017)