

# DEREK S. RIEMER

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## About Me

I enjoy using my talents as a computer scientist to create and improve accessible, secure, and highly performant solutions to complex user interface problems. As a collaborative and hardworking developer, I have directly contributed to the Google Drive codebase, leading projects to success that rolled out to a one billion user product. I am looking for an opportunity to have a significant impact on complex and meaningful projects.

## Proficient:

Python, HTML / JavaScript/typescript/web frameworks, accessibility best practices, Non-visual desktop access (NVDA), screen readers, release management, i18n and l10n, web performance, analytics, project leadership

## Familiar:

C++, Java, c#, bash, nginx and ubuntu server stacks, npm and pnpm package management, Linux system admin, Voiceover, Jaws for Windows, WCAG2, CSS, Encryption concepts, password security concepts, IT Security best practices

## Education

University of Colorado Boulder, Computer Science BS, Graduated 2018, 3.5 GPA

## Work History

### Google Drive Web software engineer (SWE), July 2018 - March 2025

- Improved Google Drive menu rendering performance by 50% at the 50<sup>th</sup> percentile, 30% at the 95<sup>th</sup> percentile.
- Designed and Implemented qualitative and quantitative user interaction data collection systems in Drive Web
  - Integrated systems for collecting qualitative feedback about user interactions in real time
  - Contributed to systems for collecting timing stats for individual critical user interactions
  - Integrated frameworks for halting rollouts when key metrics regress
- Consulted with engineers on hundreds of accessibility bugs to Google products.
- Road mapped and Maintained internationalization tooling on a 1 billion user product (Google Drive).
  - Tooling ensures translations are appropriately translated
  - Tooling allows release managers to directly track missing translations with team members across a 45+ member team.
- Designed and implemented data sonification for key performance data in Drive Web.
- Team member on an effort to render Drive server side, causing 50% improvement to page load time.
- Participant in oncall rotations, including bug triage and release management.

### Dictationbridge project engineer, fall 2016 - spring 2018.

- Design and implemented a system for blind users with no arms to browse the web and their computers with dictation.
- Extensive work was conducted using highly specialized python for this project, and familiarity with c-sharp, and speech recognition systems.

### President, Braille it 4U, LLC, Arvada, CO. November 2011 to Fall 2014

- Braille it 4U was a company I cofounded in 2011.

- We provided local businesses and restaurants with easy to use braille and large print services so blind people would have access to braille menus, obituary flyers, and any other document a business wanted printed for a blind customer.
- Also offered a digital menu, and a website where local blind people could find restaurants with accessible menus.

Technical intern, Benetech, Summer 2016 and Summer 2017.

- Implemented the Open Dyslexic Font into the Radium ebook reader.
- Implemented prototypes for the Diagram project, adding settings pages and configurable image descriptions to ebooks.
- Conducted accessibility testing for the Poet image training tool.

Web accessibility tester, Office of Information Technology, University of Colorado Boulder, Spring 2015 to spring 2018.

- Tested for problems facing students with disabilities using university and third party web apps.
- Drawing from experience working on the NVDA project, helped developers understand the root cause of accessibility bugs, pointing out places where a simple tweak will make the user experience better.
- show developers how their software impacts disabled users, so they find a new passion for their work and want to make their software more accessible.

## Community Activities

NVDA Add-on code reviewer and site maintainer, Spring 2016 – spring 2018.

- I ensure new submissions for addons (Small pieces of software to extend the functionality of the screen reader) are not malicious, dangerous, or illegal, before uploading the addon for the users of the screen reader.
- Maintained the addons website, gaining experience with troubleshooting website issues.

Author of 9 NVDA Addons including: Crash hero, Console Timer, and Notepad++ accessibility fixes.

- Worked with, and developed complex python systems, including NVDA, which has more than 150k lines of code.

Other:

- Plenary Lunch Panel: Technology Accessibility in Higher Education — the Student Perspective, Accessing Higher Grounds conference Westminster Colorado, Fall 2015. <http://accessinghigherground.org/thursday-agenda2015/>
- Ran sessions at NVDACon, presenting accessibility of Google Apps. Spring 2015 and Fall 2015
- Created and published tutorials on using Google Apps with a screen reader. Fall 2014.

## Leadership Experience

NVDACon Chair, Spring 2016 – spring 2019, Fall 2021- 022.

- NVDACon is a global online conference for the NVDA screen reader for windows.
- Organized presenters, conducted promotional interviews, and ensured a well-maintained website.
- Motivated blind people to try their hand at leadership, technical development, and career building skills to achieve a successful conference.
- Lead constantly changing team of volunteers from 3 continents.
- Grew the conference from 40 live participants to 100 live participants on 6 continents and remote island nations, and hundreds who watched the archives.

NVDA 10<sup>th</sup> anniversary celebration's planning committee, 2015- June 2016

- Assisted in planning a keynote with multiple speakers, and promoting the conference.
- Ran two sessions at the conference and assisted with session moderation.

Completed Project to obtain the rank of Eagle Scout, Anchor Center for Blind Children in Denver Colorado, October, 2012

- Designed and created a sensory playground for the children of the center who are all visually impaired.
- Over 350 hours were devoted to the project which resulted in a unique sensory playground for the students.

## Research

Nonvisual Access to an Interactive Electric Field Simulation: Work in Progress: ASSETS 2015, Derek Riemer and Clayton Lewis, Oct 2015

More info available at <http://assets15.sigaccess.org/acceptedPosters/54.html>

Student Enovation Conference, UIST 2014

- Presented a demo of an application to know if a light was left on in a room. We used the Kinoma Create (A hardware device for rapid prototyping of internet of things applications).

Sikuli lab, tactile book project, spring 2014 – Spring 2015

- Provided Usability advice for the researchers.

## Recognition and Awards

- NV Access Certified NVDA Expert, February 2017, present
- Second place for most useful app, student innovation competition, UIST 2014
- UC Boulder Dean's list, Fall 2013
- City of Arvada/KATV's Ralston Valley Super Student of the year Award October 2012