Richard Matthew McCutchen
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(Please email me if you need my phone number or postal address.)

INTERESTS (not exhaustive)
- End-user development
- Programming languages and formal methods
- Information security

EXPERIENCE

1/2022–present	**Applied scientist at Amazon.** Working on Amazon Verified Permissions (https://aws.amazon.com/verified-permissions/), a system that eases development of high-assurance authorization models for third-party applications.
9/2020–12/2021	**Software engineer at Correct Computation.** Contributed to 3C, a tool that partially automates conversion of C programs to Checked C to verify spatial memory safety (https://github.com/correctcomputation/checkedc-clang).
9/2014–10/2018	**Graduate student in computer science in the Software Design Group, Massachusetts Institute of Technology.** Developed Espalier (https://sdg.csail.mit.edu/projects/espalier), a tool that truly integrates structured data into the spreadsheet paradigm to make it easier for non-experts to build a wide class of interactive applications (paper in Onward! 2016, demo in LIVE 2018).
6/2017–8/2017, 5/2018–6/2018	**Internships with Calc Intelligence team at Microsoft Research.** Developed "elastic sheet-defined functions" (https://mattmccutchen.net/elastic-sdfs/), a spreadsheet extension that helps non-experts reuse computations on input arrays of different sizes (paper in JFP, presented at ICFP 2020).
9/2011–8/2014 5/2012–8/2014	**Software engineer at Google.** • Web Search SRE (production) team. On call, and extended Python-based system deployment tools to automate more steps of the process.

EDUCATION

8/2007–5/2011	B.S. in computer science and mathematics, University of Maryland College Park.

OTHER PROJECTS

11/2016–present	Co-maintainer of Braid (https://cristibalan.github.io/braid/), a tool to mirror one Git repository into a subdirectory of another (merging with downstream changes).

HONORS

4/2014	National Science Foundation Graduate Research Fellowship.
4/2009, 2/2010	ACM Intercollegiate Programming Contest World Finals: 20th place, 14th place (University of Maryland team).
11/2009	Computing Research Association Outstanding Undergraduate Research Award.
8/2005, 8/2006, 8/2007	International Olympiad in Informatics: gold medal 2007 and 2005, silver medal 2006.
1/2007	Finalist, 2007 Intel Science Talent Search.