Carl Schroedl

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University of Wisconsin – Madison B.S. in Computer Science, 2008-2012

United States Geological Survey Water Mission Area, GS-12 Computer Scientist, 2013-Present

Software Engineering

- Delivers national-scale water data systems through collaboration with scientists, sysadmins, DBAs, designers, scrum masters, product owners, cloud infrastructure specialists, compliance and cybersecurity experts, operations, architects, +35 developers
- Designs and develops monolithic and microservice systems using Java, Spring, Python, JavaScript, Vue.js, TypeScript, Docker, PostgreSQL, and GitLab CI/CD
- Leverages AWS including Lambda, S3, SQS, SNS, RDS, CloudFront, EC2, X-Ray, the Serverless Framework, and the CDK
- Contributed to +200 git repositories

Engineering Leadership

- Led workshop to identify needs for the +4,000-strong USGS coding community
- Authored USGS-wide best practices
- Represents the Water Mission Area on the USGS Software Steering Committee
- Contributed to drafts of the DOI Open Source Software Policy
- Advised the DOI on establishing an ATO for GitHub Enterprise Cloud
- Chaired and regularly presents at developer knowledge-transfer meetings
- Recruits and onboards new staff
- Mentored three summer student interns
- Defined criteria for a $90k grant

Acting Scrum Master

- Acted as scrum master for 6 months
- Facilitated standups, retrospectives, sprint and release planning meetings
- Migrated team from Google suite to O365
- Introduced backlog refinement ceremony
- Improved team's processes and tools for addressing technical debt

Product Owner of Water Enterprise Standards and Tools

- Established processes, tools, and culture that empowers ~50 IT staff to collaboratively evolve technical standards
- Enabled fulfillment of best practices through agile product ownership of a platform of services including Mend SCA, Codacy, DORA4 metrics, and secure Docker base images
- Acquired +$120,000 software licenses

Selected Training: No Fluff Just Stuff (4 times), FOSS4G (2 times), iEMSs, Data for Impact, Geometry of Redistricting, International Conference on Social Choice and Voting Theory (presented paper), dozens of local tech user meetups on Java, Python, JavaScript, Big Data

Selected Books Read: Accelerate, The Pragmatic Programmer, The Ideal Team Player, more

Activities & Interests: Science, sustainability, bicycle touring, learning Social Choice Theory and applying it via the open source Pivot Libre project