Soeren Walls

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- BA in CS from top-30 liberal arts
- 10+yrs experience in software
- 5+yrs experience as a tech lead
- NJ→CO→Budapest→CA→CO
- AI[1] and self-driving car[2] enthusiast
- Open-source and google3 experience

Experience

Senior Software Engineer Sep. 2017 – Present

Google Cloud (Reliability Infrastructure) *Denver, CO (remote)*

- Expanded scope of responsibilities as Tech Lead (TL) of 17 software engineers (SWEs) for 3 internal product teams
- Wrote full-stack req's and design docs for new featureset, delegated to 3 SWEs, launched to >200 internal MAUs; reduced toil by 1.5 SWE yrs across 90% of Cloud revenue streams in 6mo.; projected to save 18.5 SWE yrs in 1yr
- Organized fix-it sprints for team; personally reduced tech debt in TypeScript/Golang codebase by 10d in 1 quarter
- Guided engineers to consistently maintain >90% incremental code coverage and >80% absolute coverage as TL
- Wrote asynchronous test harness predicates that reduced end-to-end test flakes from >30% in some cases to <1%

Software Engineer III

Google Cloud (Engineering Productivity and Developer Intelligence) *Denver, CO (remote)*

- Designed RESTful APIs and led a team of 3 SWEs to implement Angular web app in 6 months that secured the product's success, in the first year saving 56.1 SWE yrs in toil reduction across 90% of Cloud revenue streams
- Taught Angular dev & test best practices to 14 engineers as TL; guided 3 release engineers to convert to SWE
- Reduced customer onboarding time by 99.6% (72h → 15m) by implementing empty states averaging 1 click/day
- Kept user trust by removing time-zone bugs; drove wide adoption of CivilDate library to avoid future regressions

Software Engineer II

Google Cloud (Engineering Productivity) *Sunnyvale, CA*

- Led 3 SWEs to implement App Engine microservices in Java with Polymer FE after successful demo to leaders
- Gave microservices tech talk to audience of 500 at Cloud Next SF and 334 at Next UK with 90% positive feedback
- Reviewed 59K+ lines and contributed 65K+ lines of Java/JavaScript according to Google best practices as TL

Engineering Resident

Google *Mountain View, CA*

- Contributed 10K+ lines of Java and JavaScript; learned Borg, Spanner, Flume and BigTable internal technologies

Projects

Self-driving car controller | *C++, Udacity Car Simulator* Dec. 2016 – Dec. 2017

- Wrote a PID controller w/50mph avg on winding roads using CTE & derivative to control steering & acceleration
- Implemented an MPC controller w/more natural human-like driving using a cost function to do path optimization
- Tested results against the Udacity car simulator, including an artificial 100ms delay to simulate actuator latency
- Combined MPC controller with a Kalman filter to estimate states of moving objects from noisy lidar & radar data

Maze-solving Robot | *Arduino, C* Apr. – May 2015

- Wrote C code on Arduino microprocessor with BOE shield, pair of IR sensors, contact whiskers and servo motors
- Designed and implemented custom subsumption architecture to solve complex mazes even with "islands": follow walls, mark intersections, maintain a dynamic grid in-memory, identify when stuck, and make corrective decisions

Education

Colorado College Colorado Springs, CO

B.A. in Computer Science & Theatre w/distinction, summa cum laude, 4.0 GPA *Aug. 2013 – May 2017*

Budapest University of Technology & Economics Budapest, HU

Computer Science semester abroad, 3.9 GPA *Aug. – Dec. 2015*

Technical Skills

Languages (advanced): Java, TypeScript, JavaScript, HTML/CSS | **Languages (proficient)**: Python, C/C++, SQL
Frameworks: TensorFlow, Android, Angular, React, Lit, NodeJs, SpringBoot, Material-UI, WordPress, StrapiCMS
Developer Tools: Git, Mercurial, Docker, TravisCI, Google Cloud (GCF, GAE, GKE, BigQuery), AWS, VS Code
Libraries: Arduino, OpenCV, OpenGL, NumPy, Matplotlib, Java Futures, Vega-lite, Google Charts, Google Analytics