

William Goodall

(201) 247-0282
wgoodall01@gmail.com
github.com/wgoodall01
williamgoodall.com

Education

2019-2023 **Georgia Institute of Technology**, College of Computing
(est.) Bachelor of Science, major in Computer Science, 3rd-year, GPA 3.81 Relevant coursework:
CS 1332 (*Data Structures and Algorithms*), CS 2110 (*Systems Architecture*), CS 3210 (*Operating Systems*),
CS 3220 (*Processor Design*), CS 3251 (*Computer Networking*)

History

2019-2021 **Mesmer Eyes, Inc** Remote
Developer (2019-2021), Intern (2019)
Worked to automate mobile app user experience and accessibility testing. Spearheaded several projects:
Mesmer Gherkin (a compiler for English-language descriptions of app tests)
– Empowered customers to precisely define app tests, across Android and iOS, in a plain-English domain-specific language
– Worked to unify many of Mesmer’s different internal representations of test logic into one common AST
– Collaborated with the Customer Success Team, writing Gherkin code to rapidly solve client problems
– Employed coverage-guided fuzzing and extensive snapshot testing to find new bugs and stop regressions
The Mesmer Sidecar (cli.mesmerhq.com/sidecar)
– Built system to locally audit Android apps for accessibility issues, attaching to target apps at runtime and evaluating a proprietary ruleset against data extracted from Android APIs and in-house heuristics
– Built system to attach to a running Android app, extract accessibility data, and run in-house heuristics
– Created WCAG 2.0 rules engine to find accessibility issues and explain what’s needed to fix them
– Designed marketing materials, website, and pitch video for release on Product Hunt (#3 App of the Day)
The Mesmer CLI (cli.mesmerhq.com)
– Integrated the Mesmer platform with developer workflows as a part of Mesmer’s larger shift-left strategy
– Built integrations with unstable internal APIs, maintaining a stable public command-line interface for client scripts, integrations and automation
– Implemented CI/CD and a comprehensive test suite, auto-importing user error reports into failing tests, and deploying fixes across Mac, Windows, and Linux auto-updaters in 20min
– Provided front-line support, dealing directly with five Fortune 500 clients and many other smaller businesses
2019 **Wolfram Research** Waltham, Massachusetts
Student, Wolfram Summer Camp
Researched both traditional and machine learning approaches to algorithmically determine the physical scale of satellite images. Final model achieved $r^2 = 0.73$ using feature extraction and a small dense neural net.
2017-2018 **Transparenssee Systems** New York, NY
Intern, Developer
Created a client-facing customization tool for web embeds. This project was deployed to more than 60 local newspapers across the US, allowing non-technical users to integrate real estate platform enclosure.io and agricultural classifieds site agrisearch.com with their own properties.
– Designed and built full-stack web applications (React/Redux frontend, Express.js backend)
– Created an automated CI/CD pipeline to build, test, and deploy the application to Kubernetes

Skills and Projects

Languages	Rust, Java, C, C++, JavaScript/TypeScript, Go, Python, Wolfram Language, VHDL, Verilog
Frameworks and Tools	Git, CI/CD (Jenkins, GH Actions), Docker, GraphQL, React (+Native), Next.JS, WebAssembly
Platforms	Google Cloud, AWS, Android, Firebase, Kubernetes, Heroku, Wolfram Cloud

Motor Controller (2021) FPGA-based closed-loop proportional servo controller. Used feedback from a quadrature encoder to position an output shaft with sub-degree precision. *Designed in VHDL, coursework for ECE 2031, Digital Design Lab.*

Boolean (2020) Symbolic computer algebra system for rule-based simplification of Boolean expressions. Contains a rudimentary SAT solver. *Written in Rust, compiled to WebAssembly, runs in-browser at boolean.w01.dev.*

Cookie (2019) Dynamic cookbook. Based on the user’s cooking preferences, construct a set of recipes as dependency graphs, simplify them by merging similar steps, and sequence them in parallel as the user cooks the meal. *Android, iOS app implement with React Native and TypeScript. Released to Google Play: [bit.ly/2muVZIY](https://play.google.com/store/apps/details?id=ly/2muVZIY).*