# STEWART HOLLOWAY

Stewart.M.Holloway@gmail.com • Stewart-M-Holloway.github.io
San Francisco Bay Area

## EDUCATION

**B.S. in Biomedical Engineering,** Cockrell School of Engineering; University of Texas, Austin May 2016
**M.S in Computer Science**, College of Computing; Georgia Institute of Technology Expected: May 2023
Computing Systems Specialization
*Relevant Coursework:*

Operating Systems, Computer Networks, Machine Learning, Deep Learning, Advanced Linear Algebra for Computing, High Performance Computer Architecture, Artificial Intelligence for Robotics, Artificial Intelligence for Gaming, Information Security, Advanced Internet Applications, Graduate Algorithms, Real Time Digital Signal Processing, Software Design and Implementation, Embedded Systems, Introduction to Computing, Calculus, Differential Equations, Discrete Mathematics, Numerical Methods, Probability and Statistics, Signals and Systems Analysis, Biomedical Instrumentation & Measurement

*Certifications:*

AWS Technical Essentials, Developing for AWS, Architecting for AWS

## SKILLS

**Languages:** *High Proficiency in:* Python, C/C++, Java, Javascript, Typescript
*Familiar/Experience with:* HTML, R, Assembly
**Skillset:** Amazon Web Services (AWS), Internet Applications, Machine Learning, Control Systems (Digital and Analog), Algorithms, Embedded Systems, Operating Systems, Digital Signal Processing, Networking, Sensor/System Integration, Robotics, Verification, Validation, and Test

## WORK EXPERIENCE

**Software Development Engineer** – Amazon; Sunnyvale, CA **2022-Present**
Participate in the design, implementation, and deployment of successful internet-scale systems and services in support of Alexa Health and Wellness Initiatives

- *Responsibilities*
  - Participate in the definition of secure, scalable, and low-latency services and efficient internet processes.
  - Work with cross-functional teams delivering on demanding projects.
  - Functionally decompose complex problems into simple, straight-forward solutions.
  - Understand system interdependencies and limitations.
  - Share knowledge in performance, scalability, enterprise system architecture, and engineering best practices.
- *Achievements*
  - Assisted with the design and deployment of an internet application serving billions of consumer device, at consistent TPS of > 4000
  - Drove Operational Excellence for various internet applications including monitoring, automated alarming, security and reliability
- *Technologies*
  - AWS Architecture, Cloud Computing, Serverless Tech, Continuous Integration/ Deployment (CI/CD), Dynamo DB, SQS
  - Java, Javascript, Typescript, Python, Ruby, etc…
  - Junit, log4j, integration test suites, various profiling tools

**Senior Systems Engineer** – Sartorius BioAnalytics; Fremont, CA **2021-2022**
A lead technologist for novel assay technologies. Drove research, development, intellectual property and sustaining for technologies related to optics, microbiology, and liquid handling.

**Senior Systems Engineer** – Avails Medical; Menlo Park, CA **2020-2021**
Responsible for providing technical direction and system level expertise for the design, development, and sustaining of IVD products including electrical sensors, embedded systems, algorithms, hardware, software, and associated disposable cartridges.

**Senior Bioengineer** – In Vitro Technologies, Triple Ring Technologies; Newark, CA **2019-2020**

**Bioengineer II** **2017-2019**
In charge of developing systems spanning optics, electrical engineering, assay development, microfluidics, and mechanical engineering to develop various IVD devices encompassing a wide breadth of operating principles.

**Project Engineer** – Advanced Neuromodulation Systems, Abbott Labs (Formerly St. Jude Medical) Plano, Texas **2016-2017**
Create / modify designs for intermediate problems; design / modify complex components and/or processes; write detailed design specifications.

**Biomedical Engineering Intern** – Advanced Technology Group, Luminex Corp; Austin, Texas **2014-2016**
Developed new Molecular and/or Immunoassay based medical diagnostics technologies within a fast-paced environment, Understand the end-product, its intended function, and how it will be used by the customers.

## PUBLICATIONS

Luan, L.; Wei, X; Zhao, Z.; Siegel, J. J.; Potnis, O.; Tuppen, C. A.; Lin, S.; Kazmi, S.; Fowler, R. A.; **Holloway, S.**; Dunn, A.K.; Chitwood R. A.; Xie, C. Ultraflexible nanoelectronic probes form reliable, glial scar–free neural integration. *Science Advances*. **2017**, *Vol. 3* no.2

## PATENTS

APPARATUS, SYSTEMS, AND METHODS FOR IDENTIFYING ONE OR MORE INFECTIOUS AGENTS IN A SAMPLE USING MACHINE LEARNING. Application No. 63/210,396. Filed Jun 15, 2021.
ARTICLES AND METHODS FOR PERFORMING ASSAYS. Application No. 63/221,690. Filed Jul 14, 2021.