

Kelvin Abrokwa-Johnson

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Experience

Square

Software Engineer - Embedded January 2018

- Worked on Operating System and firmware for [Square Register](#) and [Square Terminal](#)
- Worked on new product bring-up and development, including supporting manufacturing tests and validation
- Developed build and automated testing infrastructure

Stack: C, C++, Java, Python, Ruby, Groovy, Bash, Make, Android, Linux

eero

Software Engineering Intern - Embedded May 2017 → Aug. 2017

- Worked on embedded software team for the eero mesh wifi router
- Designed and implemented memory profiling tools for the router
- Improved visibility into router operation by adding tracking for network events in libraries like hostapd

Stack: C, Python, Linux

NBT Solutions

Software Developer - Data/Web Jan. 2017 → May 2017

- Researched ways of transmitting and visualizing large geospatial datasets in the browser
- Designed and implemented a Javascript library for parsing and rendering [vector tiles](#)

Stack: JavaScript, Node.js, Protobuf, PostgreSQL

Google

Software Engineering Intern - Data/Backend May 2016 → Aug. 2016

- Worked on backend services at [Nest](#), focusing on data infrastructure
- Architected and implemented REST API and dashboard for monitoring loading of and access to data in [GCP BigQuery](#)
- Designed and built data pipelines for log and billing data

Stack: Python, Nginx, Node.js, D3.js, Google Cloud Platform, MySQL, Bash

Mapbox

Software Engineering Intern - Data/Web Jan. 2015 → April 2016

- Developed open source JavaScript libraries like [GL-Draw](#), a drawing/editing tool for geospatial data powered by the Mapbox-GL.js renderer
- Worked with a team to develop [Mapbox Studio](#), a state of the art Cartography tool in the browser
- Contributed to open source projects like [Open Addresses](#) and developed data import pipelines for the geocoder

Stack: JavaScript/Node.js, C++, Bash, PostgreSQL, Python, AWS, WebGL

AidData

Data Management Research Assistant July 2014 → Jan. 2016

- Wrote programs to automate the quality assurance pipeline of geocoded international aid data
- Created data visualization (D3.js, matplotlib, etc.) and reports (ReportLab) of monetary flows from aid donors to recipients

Stack: Python, Node.js, D3.js

W&M Campus Recreation Center

Group Fitness Instructor Dec. 2013 → Dec. 2014

- Taught classes in Body Pump and small group series in TRX suspension training

Research

- Satellite development project (TribeSat)
- Telerobotics prototyping in collaboration with NASA Langley
- Computational dynamical systems analysis at The College of William & Mary

Selected Projects

- [GL-Draw](#): principal author of open source geospatial drawing/editing library
- [Robo Ops](#): wrote backend and frontend for rover operation in prototyping experiment for NASA's RoboOps
- Picard: build tools for Android OS and Qualcomm firmware

Technical Proficiencies

Languages: C • JavaScript/Node.js • Java • Python • C++ • Go • Bash • Julia • Matlab • SQL • Groovy

Tools: Linux • Android • Git • SVN • AWS • GCP • LaTeX • Make • Jenkins CI

Frameworks/Web Development: HTML5 • CSS3 • React.js • Redux.js • D3.js • Express.js • Django • Flask • Nginx

Skills and Interests

Spoken Languages: French • Ga • Twi • Arabic (elementary proficiency)

Interests: electronics • mathematics • tennis • running • soccer • music performance (trumpet, guitar) • poetry • drawing • painting

Education

B.S. Applied Computational Mathematics

The College of William & Mary Aug. 2013 → Dec. 2017

- Minor in Computer Science
- Graduated [Phi Beta Kappa](#)
- [James Monroe Scholar](#) and [William & Mary Scholar](#)
- **Relevant Coursework:** Operating Systems • Systems Programming • Simulation • Computer Organization • Software Development • Algorithms • Data Structures • Programming Languages • Linear Algebra • Numerical Analysis • Probability • Abstract Algebra
- **Clubs and organizations:** Club Tennis • Club Soccer • Sailing Team • Club Cross Country • Newspaper blogger • Students for University Advancement • Class Senator

International Baccalaureate Diploma

Stonewall Jackson High School Sept. 2009 → Jun. 2013

- Graduated in top 1% of class of 500+, summa cum laude
- National Merit Scholarship Semi-Finalist
- Varsity tennis captain • President of National Honor Society • President of French Honor Society • PWC SPARK Award Recipient