

# Tyler Austin Kaye

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## TOOLS & LANGUAGES

**Languages:** Java, Python, C, Swift, C++, Objective C, R, HTML/CSS, Ruby, Javascript, Julia, Verilog  
**Tools:** MongoDB, TensorFlow, Firebase, Stitch, Cocoa Touch, Rails, MySQL, Git, Awk, Heroku Dev Services, Scons

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## EDUCATION

**Princeton University** (Princeton, NJ) September 2014 - June 2018

- Major: Computer Science, Bachelor of Science in Engineering GPA: 3.84
- Minors: Engineering Management Systems | Statistics and Machine Learning
- Coursework: Neural Networks, Machine Learning, Distributed Systems, Computer Vision, Information Security, Advanced Programming Techniques, Optimization, Logic Design, Programming Systems, Probability Theory

**Bronfman Youth Fellowships** (Jerusalem, Israel) Summer 2013

- Engaged in Hebrew text study regarding pluralism, religion, and politics with professors and prominent guest speakers

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## PROFESSIONAL EXPERIENCE

**MongoDB - Platforms Intern** (New York, NY) Summer 2017

- Developed a standalone embedded MongoDB to be used on Android and iOS platforms
- Designed a C-API and cross compiled the C-Driver on top of it order to integrate Mongo into an iOS application in Xcode
- Handled feature additions, bug fixes, and build failures: <https://github.com/mongodb/mongo/commits?author=tkaye407>
- **Technologies Used:** C++, C, AWS, Objective-C++, SCONS, MongoDB

**MasterCard – Software Architecture Intern** (New York, NY) Summer 2016

- Designed the POC for the IOS Embedded Registration Framework for new digital payments product
- Developed a web application to empower female farmers in rural India as part of an intern challenge
- **Technologies Used:** Java, Swift, Objective C, JSON, JWT/JWE/JWS, Swagger, Cocoa Touch Framework, HTML

**iXperience Web Development Bootcamp – Student** (Cape Town, South Africa) Summer 2015

- Studied the language Ruby before learning the Rails MVC framework. Studied routing, models, databases, and associations
- **Technologies Used:** Ruby on Rails, Bootstrap, Heroku, Git/GitHub, API's, HTML/CSS, JQuery, AJAX, Map API's

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## PROJECTS

**RipeOrWrong:** <https://github.com/tkaye407/RipeOrWrong> 2017

- Developed seam carving algorithm to generate a robust dataset of thermal images of fruits
- Trained two different convolutional neural networks to grade and identify poor quality fruits and vegetables
- Integrated the more successful network into an Android application utilizing the FlirOne thermal imaging camera SDK
- **Technologies Used:** TensorFlow, Convolutional Neural Nets, Android Studio, Java, Python, FlirOne SDK, AWS

**Wager:** <https://github.com/tkaye407/Wager> 2017

- Designed and developed a social media gambling application that enables users to place or take bets with friends and/or those in nearby areas. In charge of the back end of the application including integrating Firebase, Venmo, and Geofire
- **Technologies Used:** Swift, iOS, Firebase, GeoFire (geolocation-based querying)

**Git Friends – Creator and Developer (iXperience)** - <https://secret-mesa-6285.herokuapp.com/> Summer 2015

- Developed a web application for Mentors and Mentees to connect, share resources, and code. Mentors can chat with their Mentees, endorse skills, browse companies/jobs, and develop meaningful relationships
- **Technologies Used:** Ruby on Rails, Git/Github, Bootstrap, HTML/CSS, JavaScript, JQuery

**Sorting Visualizer** - <https://github.com/tkaye407/SortingVisualizer> 2015

- Developed a Java GUI to aid the education of 14 different sorting algorithms by creating a visual representation

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## EXTRACURRICULAR ACTIVITIES

**Princeton University Varsity Sprint Football Team – Wide Receiver and Punter/Kicker** September 2014 – 2017

- Time commitment: Fall 18+hrs/week -- All-CSFL Second Team (2015), Special Teams MVP (2014)

**Princeton Engineering Education for Kids – Tutor / Engineering Mentor** February 2014 - Present

- Teach Lego Robotics and general engineering challenges to children at local middle school – Engineering Mentor

**Princeton Computer Science Department Grader – Algorithms and Data Structures Grader** September 2016 - Present

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## AWARDS

**Princeton University**

- **Quin Morton Freshman Research Award:** “Double Disequilibrium: The Physics Behind Man’s Wilderness Relationship”
- **2015 Academic All-Ivy Recognition:** Given to 5 athletes best combining academic excellence with athletic accomplishment