

Allen Sanford

Full-Stack Developer

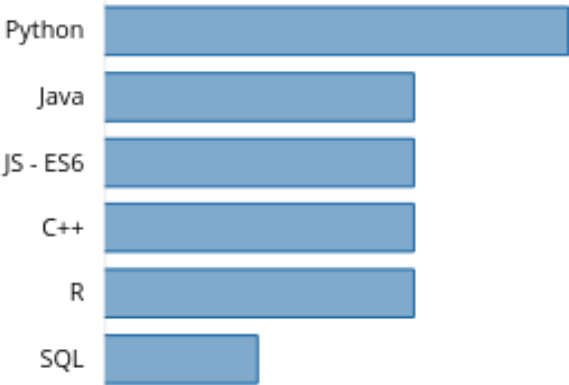
A full-stack software engineer with a mathematical background and interest in data science looking to utilize my industry and research experience at a full-time position starting January 2019.

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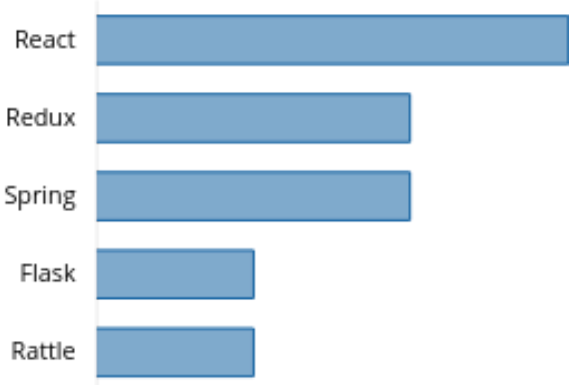
Education

Rochester Institute of Technology (RIT)	
<i>Masters of Science</i>	4.0/4.0
Applied and Computational Mathematics	
<i>Bachelors of Science</i>	3.4/4.0
Physics, Computational Mathematics	
<i>Expected Graduation</i>	Dec 2018









Languages



Frameworks



Interests

-  Backpacking
-  Broomball
-  Hackathons
-  Linux
-  ML
-  Modeling
-  Optimization
-  Physics

Employment

Full Stack Engineer (Co-op)	Jun 2017 - Dec 2017
<i>Intuit</i>	
<ul style="list-style-type: none">Migrated front-end stack from Backbone.js to React with Redux-Saga.Implemented back-end services and APIs for upcoming features using Java 8 and Spring.Formed a team to build a statistical model for a customer-facing feature.	

Contact Lens Research Assistant	Jan 2015 - Jan 2017
<i>RIT, Alden Optical</i>	
<ul style="list-style-type: none">Modeled the progression of a soft contact lens and a human eye towards equilibrium to inform contact lens design.Worked iteratively with contact engineers to create a web application displaying design changes in real-time.Built a simulation framework in C++ that computed the pressure distribution on the eye given an initial lens shape.	

Cardiac Imaging Software Developer	Feb 2015 - Present
<i>RIT, Johns Hopkins Hospital</i>	
<ul style="list-style-type: none">Created a MATLAB pipeline that constructs to-scale models of a patient's heart and torso, computes the electrical potentials on the heart's surface, and determines the qualitative location of the cardiac arrhythmia.Conducted patient analysis in collaboration with electrophysiologists at Johns Hopkins Hospital resulting in the successful treatment rate of 92%.Informing the design of a 120-electrode vest using a genetic algorithm. The fitness function is being optimized to improve signal quality from specified regions of the heart.	

Projects

Numerical Modeling of Cancer Cells	Aug 2016 - May 2017
<ul style="list-style-type: none">Prototyped a solution in Julia to show the feasibility of studying healthy and cancerous breast cell interactions.Created a framework in C++ that simulated the interactions of 100,000 cells in 10 minutes.Invented a spatial hashing algorithm that increased the simulation's speed by a factor of 8.	

PhysLang	Sept 2017 - Present
<ul style="list-style-type: none">Aimed at providing an introduction to physics through light programming.Created an interpreter for a new language using Python's Rply library.	