Karishma Reddy Khan

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Education

Graduation: May 2021	**Brandeis University	Waltham, MA** PhD	Computer Science
Graduation: May 2017	**Brandeis University	Waltham, MA** Master of Arts	Computer Science
Graduation: May 2015	**Mount Holyoke College	South Hadley, MA** Bachelor of Arts	Magna Cum Laude Majors: Physics and Theatre	Minor: Electrical Engineering

Experience

June 2016–Aug 2016	**High Energy Physics Lab, Brandeis University Physics Department	Waltham, MA** *Programmer* • Developed a Matlab GUI to simulate experiments to map the human eye • Developed image stitching algorithms to stitch together experimental data results
Sep 2015–Dec 2015	**SAXSLAB U.S.A.	Northampton, MA** *Developer* • Company manufactures X-Ray scattering devices and analyzes scattering data • Updated pre-existing Matlab 2012a GUI code to be compatible with Matlab 2015a
June 2015–Aug 2015	**Molmex Scientific	Northampton, MA** *Intern* • Company designed and manufactured Small Angle X-Ray scattering devices • Designed 3D models in SolidWorks which are currently in use on the devices • Improved user interface of scattering devices using *spec*, a C-like language
May 2012–May 2015	**Mount Holyoke College, Atomic Force Microscopy Lab	South Hadley, MA** *Research Fellow with Dr. Katherine Aidala* • Researched solar cell applications of nanoscale semi-conductors called Quantum Dots • Studied crack formation in sub-monolayers of PbS Quantum Dots
June 2013–Aug 2013	**Fermi National Accelerator Lab	Batavia, IL** *Research Student* • Worked with Wire Position Monitors (WPMs) used to detect motion in Linear Accelerator Cavities • Developed a Matlab GUI to analyze data from WPMs that is still in use • Demonstrated that Matlab is compatible with Fermilab's accelerator network

Projects

Oct 2016 – Ongoing	**Quantum Escapement:** Escape the room style game built using Blender and Python
Sep 2016 – Ongoing	**NanoTwitter:** Small scale Twitter app built using Ruby and Sinatra as a study in scalability
June 2016 – Ongoing	**CCD:** Matlab program that simulates a CCD camera using pixel bining and Riemann sums
Jan 2015 – May 2015	**Turtle 2.0:** Arduino robot with IR driven object avoidance and RF dynamic communication

Skills

Software	**Languages:** Java, Matlab, Ruby, Scheme, Python, JavaScript, HTML, spec **Frameworks:** Sinatra, Ruby on Rails **3D Animation:** SolidWorks, Blender **Tooling:** Git, LaTeX, MySQL
Hardware	**Electronics:** Arduino, analog and digital circuitry, oscilloscopes, soldering **Lab Skills:** Atomic Force Microscopy, spin coating, plasma cleaning, machining