

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 <i>Programmer</i> <ul style="list-style-type: none">Developed a Matlab GUI to simulate experiments to map the human eyeDeveloped image stitching algorithms to stitch together experimental data results
Sep 2015–Dec 2015	SAXSLAB U.S.A. Northampton, MA <i>Developer</i> <ul style="list-style-type: none">Company manufactures X-Ray scattering devices and analyzes scattering dataUpdated pre-existing Matlab 2012a GUI code to be compatible with Matlab 2015a
June 2015–Aug 2015	Molmex Scientific Northampton, MA <i>Intern</i> <ul style="list-style-type: none">Company designed and manufactured Small Angle X-Ray scattering devicesDesigned 3D models in SolidWorks which are currently in use on the devicesImproved user interface of scattering devices using <i>spec</i>, a C-like language
May 2012–May 2015	Mount Holyoke College, Atomic Force Microscopy Lab South Hadley, MA <i>Research Fellow with Dr. Katherine Aidala</i> <ul style="list-style-type: none">Researched solar cell applications of nanoscale semi-conductors called Quantum DotsStudied crack formation in sub-monolayers of PbS Quantum Dots
June 2013–Aug 2013	Fermi National Accelerator Lab Batavia, IL <i>Research Student</i> <ul style="list-style-type: none">Worked with Wire Position Monitors (WPMs) used to detect motion in Linear Accelerator CavitiesDeveloped a Matlab GUI to analyze data from WPMs that is still in useDemonstrated 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
Aug 2016 – Ongoing 	CCD: Matlab program that simulates a CCD camera using pixel binning 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, <i>spec</i> 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