

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

Aug 2015–Dec 2016	Brandeis University Computer Science Department Waltham, MA <i>Head Teaching Assistant: Discrete Structures, Scientific Data Processing, Software Engineering Scalability</i>
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 protocols 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 devicesDeveloped code in spec, a C-like software, to improve the user interface on scattering devices
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">Worked with Quantum Dots, nanoscale semi-conductors with potential solar cell applicationsStudied 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 on Wire Position Monitors (WPMs) used to detect motion in Linear Accelerator CavitiesDeveloped a Matlab Graphical User Interface to analyze data from WPMs that is still in useDemonstrated that Matlab is compatible with Fermilab's accelerator network

Projects

Sep 2016 – Ongoing	NanoTwitter: Implementation of a small scale Twitter app as a study in scalability
June 2016 – Ongoing	CCD: Simulates the process of taking a photograph with a CCD camera using binning and integration
Jan 2015 – May 2015	Turtle 2.0: Remote control car with object avoidance capable of dynamic communication
Jan 2015 – May 2015	GPS: Robotic car capable of receiving and navigating towards GPS co-ordinates

Skills

Programming: Java, Matlab, Ruby, Sinatra, Scheme, Ruby on Rails, JavaScript, HTML, \LaTeX , Git, spec
Lab Skills: Atomic Force Microscopy, Asylum software, spin coating, plasma cleaning, oscilloscopes
Hardware: Arduino, SolidWorks, Blender, analog and digital circuitry, soldering, machining