

# GAUTHAM VARADARAJAN

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## TECHNICAL EXPERIENCE

### TETHERMEDIA LLC

Project Development Intern

Cedar Knolls, NJ

November 2015 – January 2016

- Used jQuery to create profile picture upload and edit functionality for user accounts of a realtor app
- Set up a custom server for Surespot (an encrypted message app for android) thereby confirming its flexibility for various customizations in a medical consulting app

### COLUMBIA UNIVERSITY DEPARTMENT OF ASTRONOMY

Research Assistant

New York, NY

December 2013 – August 2014

- Searched for light echoes in supernovae via image subtraction using IRAF scripts, narrowing the field of light echo candidates for future research

## PROJECTS

### SOUNDSALLAROUND (Ruby, Rails, React)

- Created a responsive audio visualization for track playback using CSS3 transitions
- Made a React class for searching tracks that could be used by multiple submission forms, resulting in DRY code
- Optimized data handling to minimize the amount of database queries executed per request to allow for scalability

### HADRON.JS (JavaScript)

*Physics Engine for Movement and Collision of Objects*

- Uses derived algorithms for detecting and handling collisions of objects (elastic and inelastic), resulting in realistic game physics
- Implements an algorithm for accurate surface friction on the motion of objects

### JUNIOR POOL (JavaScript, HTML5 Canvas)

- Implements Hadron.js (see above) to simulate pool ball collisions
- Uses nested JavaScript event handling for mouse click and drag to create a responsive user interface

**SKILLS:** Ruby on Rails, JavaScript, jQuery, React.js, C/C++ (including STL), Flux, SQL, Git, HTML, CSS

## EDUCATION

### APP ACADEMY

1000 hour coding bootcamp with < 3% admissions emphasizing pair programming and best practices

New York, NY

February 2016 – May 2016

### THE UNIVERSITY OF CHICAGO

Bachelor of Sciences in Physics and Mathematics, **GPA: 3.2**

Chicago, IL

September 2009 – June 2013

