

# LUKE ESPINA

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## EDUCATION

### App Academy, New York City

- 1000-hour software development course with < 3% acceptance rate
- Teaches full-stack web development: Rails, JS, React, SQL, TDD, algorithms, design patterns, and best practices

### Macaulay Honors College at City College of New York, CUNY

June 2016

B.S. in Physics with Research Honors, *magna cum laude*

GPA: 3.5

- Introduction to Programming, Data Structures, Discrete Mathematics, Multivariable Calculus, Linear Algebra, Differential Equations, Statistical Mechanics, Quantum Physics

## SKILLS

Python, Ruby on Rails, RSpec, JavaScript, jQuery, React, Redux, SQL, Git, HTML5, CSS3, AWS

## PROJECTS

**BassCase** – React.js | Redux.js | Ruby on Rails | AWS

live: bass-case.herokuapp.com

*Social music app inspired by SoundCloud*

github.com/lespina/bass-case

- Utilizes responsive design, animated modals, collapsible widgets and menus, hover-over previews, and intuitive playback queue control for seamless user experience
- Implements a dynamic list-based upload form for convenient multi-upload functionality
- Features a collapsible, scrollable, drag-and-drop-sortable playback queue
- Leverages Amazon S3 storage and Paperclip library for scalable file uploads

### Project 2

- lorem ipsum
- lorem ipsum
- lorem ipsum
- lorem ipsum

### Project 3

- lorem ipsum
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- lorem ipsum

## EXPERIENCE

**NASA Armstrong Flight Research Center, California**

June 2015 – Aug. 2015

**NASA Student Airborne Research Program**

- Applied ENVI/IDL geospatial software to map oil proliferation and kelp population dynamics through ~100 gigabytes of remote-sensing satellite image data
- Computed relative kelp biomass, chlorophyll a concentration, and colored dissolved organic matter levels across ~100mi and 14 days of images to evaluate environmental fallout following the 2015 Refugio Beach Oil Spill
- Distilled results into 3' x 4' poster summary and presented at large research conference

**Experimental Fluid Mechanics and Aerodynamics Lab, New York**

June 2014 – June 2016

**Research Assistant**

- Applied MATLAB and instrumentation skills to capture and study airflow
- Improved the performance of wind energy harvesters by 15% through experimentation
- Completed research thesis on vortex formation behind cylinders located in a flow field