

# Melanie Davila

## SOFTWARE ENGINEER

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🏠 New York, NY

## WORK EXPERIENCE

### Memorial Sloan Kettering Cancer Center

Oct 2014 - Oct 2016

Research Study Assistant II  
New York, NY

- Managed over 300 pediatric oncology clinical trial enrollments and performed analyses of corresponding data, facilitating peer-reviewed publications and contributing to outstanding performance during audits

### RUCDR Infinite Biologics

Dec 2013 - Jun 2014

Laboratory/Technical Assistant (Temporary)  
Piscataway, NJ

- Performed SNP analyses on DNA samples, gathering data regarding human susceptibility to disease and contributing to successful fulfillment of data requests from researchers

## PROJECTS

### midSoul | *PostgreSQL, React.js/Redux, Rails*

[Live](#) | [GitHub](#)

A full stack, single-page application for runners, inspired by MapMyRun

- Utilized Google Maps API encoded polyline algorithm to optimize database storage of geographic coordinates representing running routes, resulting in seamless UX when creating and viewing routes
- Structured FeedItem model to incorporate polymorphic associations, facilitating the aggregation of activity feed items and enabling effortless integration of other activities in the future

### (Re)Mission Possible | *JavaScript, Easel.js*

[Live](#) | [GitHub](#)

A browser-based antibody-flinging, cancer butt-kicking game

- Integrated DRY, object-oriented design principles resulting in maintainable code base
- Leveraged the Easel.js library and the attributes of its shape class in order to provide accurate collision detection, enhancing the UX

### Dynamic Record | *SQL, Ruby*

[GitHub](#)

A lightweight Ruby object relational mapping (ORM) library

- Incorporated metaprogramming techniques and SQL to facilitate database queries
- Improved user experience by providing seamless single and multi-step associations via implementation of object-relational-mapping

## PUBLICATIONS

- Perekatt, A.O, Valdez, M.J., **Davila, M.**, Hoffman, A., Bonder, E.M., Gao, N., & Verzi, M.P. (2014). YY1 is indispensable for Lgr5+ stem cell renewal. *Proceedings of the National Academy of Sciences*, 111(21) 7695-7700.
- Davila, M.** (2011). The incomprehensible nature of the origin of life. *Dialogues@RU*, 7, 69-81.

## SKILLS

Ruby  
Ruby on Rails  
JavaScript  
jQuery  
React.js  
Redux  
SQL  
Git  
HTML  
CSS

## EDUCATION

### App Academy

Dec 2016 - Mar 2017

Rigorous full stack web development course with ~3% acceptance rate

### Rutgers University

Sep 2009 - May 2013

B.A., Genetics

GPA: 3.73

Magna Cum Laude

## VOLUNTEER

### Casa do Caminho

Xerém, Brazil

Jun 2013 - Dec 2013

### STEM Educator

Designed and implemented STEM education initiatives, leveraging limited resources to expose youth and community members to subjects not otherwise taught in the local region