

# GEOFFREY NEWMAN

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## EDUCATION

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### Johns Hopkins University

PhD Candidate, Biomedical Engineering  
Dissertation: "Network Models of Neural Recordings"

*2008 - Present*  
*Expected December 2015*

### City College of New York

Bachelor of Engineering, Biomedical Engineering (Magna Cum Laude)  
Minor: Applied Mathematics

*2004 - 2008*

## EXPERIENCE

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### Fellow – The Data Incubator

*2015*

- Performed web-scraping, data cleaning, network measures and prediction on real-world datasets on the order of gigabytes using Python and Amazon cloud services for distributed computing.

### Research Assistant – Johns Hopkins University

*2008 - Present*

*Brain Computer Interface, PI: Nitish Thakor*

- Employed **graph theory** and **signal processing** techniques to solve neuroscience problems.
- Utilized **machine learning** methods to decode movement intent from neural recordings.

### Research Assistant – City College of New York

*2006 - 2008*

*Eye Movement and Vision, PI: Jay Edelman*

- Investigated **movement planning** of saccades via eye tracking data and non-invasive neural recordings.
- Created a **graphical user interface** to simplify data preprocessing.

## PROJECTS

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### Baltimore Tax Credit Map

*www.baltimoretaxcredit.com*

*Fall 2015*

*Created at HopHacks*

- Designed an **interactive online visualization** of eligibility and claims for the Maryland homeowners' tax credit to help inform Baltimore residence.
- Produced an **API** with Flask to hot-link each home on the map to its tax record.
- *Awards: **First place overall**, best user experience (sponsored by Mission:Data), best use of Baltimore open data (sponsored by Booz Allen Hamilton).*

**Product Suggestion Service** - Performed **natural language processing** on the text of 581,933 product reviews. Suggests products with reviews closely matching the description that the user provides.

## MERITS AND TECHNICAL STRENGTHS

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### Honors and Awards

NIH Neuroengineering Training Fellowship (2008-2010).  
Howard Hughes Undergraduate Research Award (2008).  
Whitaker Foundation Research Scholarship (2004-2008).

### Programming Languages

Python, Matlab, C++, Java, LaTeX, Qt, HTML, SQL.

### Computer Systems and Software

Linux, Photoshop/GIMP, Cadence VLSI design tool, SolidWorks,  
Cloud Computing (Digital Ocean, Amazon Web Services).