

# Benjamin R. Engebreth

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## About Ben

I'm a programmer and data analyst with a background in science and engineering.

## Experience

**8/2005-Now**                  **TinyEtc LLC**

As an independent programmer and data analyst, my work involves collecting datasets from varied sources in order to interpret and publish custom analysis or time series. I make extensive use of Ruby for collecting and parsing unstructured data as well as for building dynamic websites. I use R and SQL for manipulating and analyzing large datasets and to create custom cuts of generalized series or samples. I publish on the web extensively and have built a custom, numeric focused CMS with Ruby to streamline the research-to-publish process and to automate common tasks such as creating tables and charts. I have consulted for hedge funds, investment banks and institutional research firms.

**9/2010-Now**                  **Lamont-Doherty Earth Observatory**

I'm working part-time at Columbia University's Lamont laboratory building web-based monitoring and analysis tools for earthquake data.

**10/2007-5/2009**              **Majestic Research**

At Majestic I worked as a data analyst and programmer in the company's R&D group. My primary responsibility was to create new, informative research products from proprietary datasets. This work required gathering disparate data from various sources to produce informative analysis for clients seeking economic or financial insight. As an associate at the firm, I relied heavily on both my statistical programming and database experience to manipulate and interpret vast amounts of data to arrive at these research products. I resigned from Majestic in order to focus on my freelance work and to return to graduate school part-time.

**11/2005-11/2006**              **Eyebeam Openlab Research Fellow**

In 2005, I was granted a 1 year Research Fellowship At Eyebeam – an art & technology non-profit. I worked in the organization's OpenLab to promote "R&D for the public domain" by building open source web-based tools and datasets. Towards those ends, I produced a web application to track and analyze electricity use called Personal Kyoto and a web tool for collecting and republishing bookmarks from the social bookmarking site Del.icio.us. I collaborated with artist Evan Roth to create White Glove Tracking – a crowdsourced study of Michael Jackson's first moonwalk. I also worked with resident artist Bill Dolson to design synthetic meteor trajectories for his Reentry exhibition.

**2003-2005**                      **NASA Jet Propulsion Laboratory/Caltech**

As an engineer at JPL I designed and developed a GUI interface using MATLAB for spacecraft trajectory optimization as well as initial guess software that helps the user provide more physically appropriate starting guesses to the optimizer. I also did numerous preliminary design and feasibility studies for spacecraft trajectories.

**2001-2003**                      **University of Colorado**

My Research Assistantship at the University involved the analysis of altimetry data from a number of satellites in order to understand biological behavior in different physical ocean states. I also studied and implemented numerous algorithms for spacecraft trajectory design and optimization.

**1998-2001**                      **University of Georgia**

At the University of Georgia College of Education I was responsible for the computing needs of an entire division of the college that housed hundreds of faculty and staff of the college. The work included installation, maintenance, and repair of hardware and software on PC, Apple, and Linux/Unix platforms.

## Education

2003 - University of Colorado  
MS Aerospace Engineering Sciences

2001 - University of Georgia  
BS Physics *Cum Laude*

2005-2006 - FIT, NYU, SVA  
Continuing Education classes in art & design.

## Technical

Ruby, PHP, Perl, Python  
R, MATLAB, Excel  
SQL (MySQL, MS-SQL, PostgreSQL)  
HTML, XML, JSON, CSS  
Unix, Linux, OSX, Windows

## Websites / Projects

[www.deptofnumbers.com](http://www.deptofnumbers.com)

Department of Numbers is a repository for real-time social and economic indicators relevant to the broad public. I take data from government, agency and web sources and provide simple, contextual analysis at multiple geographic levels (e.g. national, state and metro).

[www.housingtracker.net](http://www.housingtracker.net)

HousingTracker provides semi-realtime monitoring of real estate trends such as inventory, asking price and affordability.

[www.personal-kyoto.org](http://www.personal-kyoto.org)

Personal Kyoto is a web based electric consumption monitoring tool for New York City residents.

[www.benengebretth.org](http://www.benengebretth.org)

Personal website.