Colin Carroll

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Experience

- **Kensho** — Cambridge, MA
  Software Engineer — *August 2015 – Present*
  - Implement search over structured and unstructured documents
    * Built and managed an elasticsearch cluster
    * Became primary way for users to navigate site
  - Built system to read and classify breaking news
    * Annotated and bucketed news with high accuracy using topic modeling, named entity recognizers, and linear classifiers
    * Increased efficiency of researchers analyzing articles for economic significance
  - Built a tool to identify articles related to a theme
    * Users could interactively build a corpus of articles around a theme
    * Used by researchers to identify all events of a certain type

- **Spiceworks** — Austin, TX
  Senior Analytics Developer — *May 2012 – June 2015*
  - In charge of machine learning and optimization on the ad operations team
  - Designed and implemented system for optimizing our delivery of display ads
    * Increased clickthrough rates by over 10%
    * Increased delivery efficiency, eliminating about 10% of wasted inventory
  - Worked with email teams on optimizing which emails to send, when, and to whom
    * Helped design and implement a Hadoop cluster to create a more agile data pipeline
    * Modelled user's responses, creating a system to put together targeted email campaigns without spamming individual users
    * Blended this model with data on new users to forecast revenue growth from the email product, and to drive business decisions over the volume and pricing of email

Open Source

- **PyMC3**
  Contributor
  - PyMC3 is a Python package for Bayesian statistical modeling and Probabilistic Machine Learning which focuses on advanced Markov chain Monte Carlo and variational fitting algorithms.

Skills

Daily. Python, R, JavaScript

Weekly. Go, SQL, Julia

Interests and curiosity. Scala, C++, MATLAB, LaTeX

Education

- **Rice University** — Houston, TX
  MA, Ph.D. in Mathematics — *Aug. 2007 – May 2012*
  - Research Interests: Geometric Analysis, Partial Differential Equations, Geometric Measure Theory, Image Processing

- **Williams College** — Williamstown, MA
  BA in Economics and Mathematics (with honors) — *Aug. 2003 – May 2007*

Other

- Avid runner: Captain of Williams College cross country team; top American in 2009 Houston Marathon, 11th in 2014 Austin Marathon, 2nd in 2016 Napa Valley Marathon
- Launched a stuffed dinosaur part of the way to space.