

Colin Carroll

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Experience

- **Kensho** Cambridge, MA
 - **Software Engineer** *August 2015 – Present*
 - 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
 - Created, populated, and maintained global event database and knowledge graph
 - * Parsed unstructured text to construct a graph model of world events and entities
 - * Graph used to study connections between entities involved in current events
 - Implemented search over structured and unstructured documents
 - * Built and managed an elasticsearch cluster, augmented with natural language processing
 - * Became primary way for users to navigate site
- **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
 - * Created a more agile data pipeline by designing and implementing a Hadoop cluster
 - * Implemented a system to put together targeted email campaigns without spamming individual users by modelling their expected responses
 - * Forecast revenue growth from this email product and drove business decisions around the product by blending this model with data on new users

Open Source

- **PyMC3**
 - **Contributor**
 - PyMC3 is a popular Python framework for building Bayesian models and performing inference on them
 - Helped with first stable release, did major work on Hamiltonian (gradient based) methods, and on improving the test suite

Skills

Daily. Python, R, SQL

Weekly. Javascript, Go, Julia

Interests and curiosity. Scala, C++, MATLAB, L^AT_EX

Education

- **Rice University** Houston, TX
 - **MA, Ph.D. in Mathematics** *Aug. 2007 – May 2012*
 - Research Interests: Geometric Measure Theory, Partial Differential Equations, 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](#).