

NICHOLAS J. RUTA, JR.**EDUCATION**

Cambridge, MA	Harvard University S.E.A.S.	2019
<ul style="list-style-type: none"> • Master of Science (SM), Computational Science & Engineering, GPA: 3.96. • Graduate coursework & research completed in data visualization, machine learning and time series analysis using pattern recognition and cross-correlation. 		
Cambridge, MA	Harvard University Extension School	2017
<ul style="list-style-type: none"> • Master of Liberal Arts (ALM), Software Engineering. • GPA: 3.86 <i>Graduated with honors – Dean’s List Academic Achievement Award.</i> • Graduate coursework completed as a special student at Harvard S.E.A.S. with concentration in data science. • Thesis: CuttleTree: Adaptive Tuning for Optimized Log-Structured Merge Trees. (http://nickruta.com/#lsmtree) 		
Los Angeles, CA	University of California, Los Angeles	2005
<ul style="list-style-type: none"> • Bachelor of Arts, Italian with concentration in International Business. 		

TECHNICAL EXPERIENCE AND PROJECTS

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- **Oracle Certifications:** Professional Java SE 7 Programmer and Expert EE 6 Web Services Developer.
 - **Spring Framework** development of REST-based web services and custom web applications.
 - **Text Mining for the Analysis of Shakespeare** research project using machine learning techniques.
 - **Custom LSM-tree Implementation in C++** exploring adaptability given various workload patterns.
 - **Python Application to Analyze Time Series Data** using NumPy, SciPy, Flask and SQLAlchemy.

EMPLOYMENT

Graduate Researcher & Teaching Fellow	Harvard University S.E.A.S.	2016 - 2019
<ul style="list-style-type: none"> • Head Teaching Fellow for CS109 Introduction to Data Science. • Designed an adaptive LSM-tree that captures workload patterns by collecting statistics during its runtime and uses different versions of tunable parameters in order to optimize the performance. • Created an application that uses time series analysis to find similarities amongst the celestial objects. (https://nickruta.github.io/time-series-search-engine/) • Used machine learning algorithms and text mining approaches to determine whether Shakespeare’s works are in fact written by the playwright himself. (http://nickruta.com/#shakespeare) • Built a visualization-based application for time series exploration through hierarchical clustering. (http://nickruta.com#data-vis) • Created a deep learning-based visualization for online image sequence classification of astronomical events. (http://nickruta.com/#deep-learning) 		
Programmer/Analyst	University of California, Los Angeles	2013 - 2016
<ul style="list-style-type: none"> • Created and consumed REST-based web services using the Spring framework. • Implemented new features, fixed bugs and optimized performance of Spring-based web applications. 		
App. Developer & Project Manager	NoAutoDealers.com	2010-2012
<ul style="list-style-type: none"> • Built iPhone mobile application using Objective-C and the iOS SDK. • Managed a java programming team of 3 to ensure projects were completed on time. 		
Real Estate Broker & Tech. Consultant	Self-employed	2008 - 2015
<ul style="list-style-type: none"> • Successfully completed 86 transactions as a licensed Real Estate broker in California. • Built custom websites with optimized online presence using SEO and Social Media Marketing. 		

ADDITIONAL EXPERIENCE AND AWARDS

- **CoderDojo Mentor (2016 – Present):** Teaching young people, ages 7 to 17, about technology.
- **Interned with the Pittsburgh Penguins Hockey team:** Provided technical support for players including Jaromir Jagr and Mario Lemieux.
- **Received UCLA Staff Appreciation and Recognition Award (2014 & 2015).**
- **Professional Golfer (2004-2009):** Competed on the Canadian, Pepsi and Golden State tours.
- **Fluent in Italian with basic speaking ability in Spanish.**
- **Enjoys Cycling, Guitar, and taking interesting photographs all around the world.**