Nitya Mandyam

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EDUCATION

NEW YORK UNIVERSITY
Ph.D. Physics
Aug 2011 - | New York, NY
Henry M. MacCracken Fellow

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
M.Sc. Physics
July 2011 | Mumbai, India

STELLA MARIS COLLEGE
B.Sc. Physics
June 2009 | Chennai, India

PROGRAMMING

Data Analysis:
Python • Hadoop • MySQL • PostgreSQL
Packages:
Pandas • Numpy • Scipy Matplotlib • BeautifulSoup Spacy • Scikit-Learn NLTK • Gensim • Keras
Web Development:
Flask • HTML • CSS • Javascript

SKILLS

Data Munging • Large Datasets • Natural Language Processing • Bayesian Inference • Statistical Modeling • Optimization • *K*-d trees • Monte Carlo Methods • Data Visualization

EXPERIENCE

INSIGHT DATA SCIENCE
Fellow
Sept 2018 - Present | New York, NY

- Developed *YouTopia* (bit.ly/2I6Sxe5), a content filter to weed out inappropriate videos masquerading as kids' content on YouTube
- Implemented a natural language classifier using latent semantic analysis and logistic regression to distinguish content, training it on thousands of video-associated text data (stored in a PostgreSQL database) obtained by querying the Youtube API
- Built a chrome extension and a web app front end using Flask, HTML, CSS and Javascript to redirect user to an alternative appropriate video

NEW YORK UNIVERSITY
Research Assistant (Astronomy) | Adjunct Instructor
Aug 2011 - Present | New York, NY

- Estimated, analyzed and compared various star formation and environment indicators in galaxies by analyzing photometric data for over 100K galaxies from the NASA-Sloan Atlas catalogue
- Identified and distinguished two different populations of galaxies with similar optical color by using a full spectral fitting method that marginalizes over stellar and dust libraries to derive Bayesian probabilistic estimates of the galaxy's physical parameters
- Modeled the effects of aperture correction on galaxy property estimations by using spatially resolved spectral data of over a million spectra from the MaNGA (*Mapping Nearby Galaxies at Apache Point*) survey
- Taught Observational Astronomy (including hands-on instruction with telescopes), Astrophysics, Physics and Astronomy in the Renaissance, General Physics, Quarks to Cosmos, etc. to over 300+ students

PROJECTS

DATAKIND DATADIVE
June 2018 | Google, New York, NY

- Contributed to the International Accountability Project's (IAP) Early Warning System to identify potentially harmful development projects
- Successfully ranked the semantic similarity between bank-funded project documents and possibly relevant news articles by employing Word2Vec methods

EXPEDITION HACKS | COMBATING HUMAN TRAFFICKING
Apr 2018 | George Mason University, Arlington, VA

- Designed a platform, "Slavery Included" (bit.ly/2xyxhKb), to alert consumers to the pervasive use of forced labor in everyday products
- Published a chrome extension directing Amazon.com users to the platform
- Presented a report on the platform on a company's labor practices using sentiment analysis on topical news items related to the same by structuring user-specific activity into API queries to IBM's Watson