# Areal Tal (Ari)  Page 1/2

**Somerville, MA 02145 | (516) 554-6129 | ArealTal@gmail.com**

## SUMMARY

**Data scientist** with a master’s degree in applied quantitative sciences.  Specializations in both research & development (R&D) and building enterprise analytics software.  Key strength is in communication, particularly in presenting concepts to a non-technical crowd and facilitating collaboration between teams.

## PROFESSIONAL DEVELOPMENT

**Massachusetts Institute of Technology,** Remote Student

**Applied Data Science Program (Bootcamp),** Incomplete         May - August 2021

**Capstone Project:** “Auto ML With Deep Validation”

**Udemi,** Remote Student

**Course: Spark and Python For Big Data With Pyspark,** Certificate Of Completion                            April - May 2021

**The Data Incubator,** Remote Student

**Data Science Bootcamp,** Incomplete      July - September 2020

**Capstone Project:** “Impact of Crisis Intervention Teams (CITs) on Arrest Rates”

## EDUCATION

**Binghamton University, State University of New York at Binghamton,** Binghamton, NY  
**M.S. Systems Science**, Watson School of Engineering and Applied Science, **GPA: 3.845**           May 2011  
  **Concentration:** “Intelligence Systems”; **Capstone Project:** “Computational Recommendation System”

**Certifications:** Lean Six Sigma Green Belt | Lean Six Sigma Brown Belt

**Academic Honor:** Accepted to the Alpha Pi Mu Industrial Engineering Honors Society

**B.A. Mathematics and Economics**, Harpur College of Arts and Sciences              May 2009

**Capstone Projects:** “Underlying Causes of Clusters of Crime” and “Smart Transportation”   
  **Academic Honors:** Ronald E. McNair Scholar | Dean’s List Fall 2006 – Spring 2007 | Xcel Student Leadership Certificate

## EXPERIENCE

**Marketing Return On Investment, division of Altman Vilandrie & Company,** Boston, MA  
 **Applied Analytics Specialist (Consulting)**March – July 2016

* Automated analysis of the year-round project of a client’s allocation of advertising funds
* Client is now able to receive a response to an urgent project request within 5 days instead of 3 weeks
* Liaised between our Consulting team and Data Science team

**Financial Crime, division of Fidelity Information Services (FIS),** Burlington, MA  
 **Senior Data Scientist/Senior Programmer Analyst (Research & Development)**September 2012 – March 2016

* Implemented the latest analytics models for each of our payment fraud products with a team of data scientists
* Won the division’s innovation competition after presenting my idea to approximately 20 managers and product owners
* Devised the ability to automate safe creation of custom analytics models & data visualizations
* Trained engineers to implement analytics models when I was the sole analytics expert of our products

**Taykey,** Herzliya, Israel     
 **Algorithm Engineer I (Research & Development)**   December 2011 – June 2012

* Built an interactive application that gives advertisement buyers flexibility in the evaluation of advertisement campaigns
* Crafted a system that scrapes large numbers of social media profiles to gather the features of our main business product

**Bloomberg L. P.,** New York, NY

**Financial Software Developer (Research & Development)**August – December 2010

* Trained in computer science and Bloomberg technologies, creating software applications using The Terminal

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## ACADEMIC RESEARCH

**Departments of Systems Science and Economics, Binghamton University,** Binghamton, NY

**Research Assistant: Case-Based Decision Theory (CBDT) Implementation** August 2009 – May 2011

* Co-authored “Computational Implementation of Case-Based Decision Theory”
* Invented a recommendation system in NetLogo such that CBDT agents can better use the knowledge of multiple agents
* Executed simulations to analyze and test the CBDT agent’s ability to solve problems

**Center of Applied Community Research and Development,** Binghamton, NY

**Research Assistant: Computational Binghamton** June 2008 – May 2009

* Identified underlying causes of clusters of crime in the city of Binghamton
* Reported findings to Weed & Seed Board, including Binghamton’s chief of police
* A $1,000,000 Department of Justice grant application used my agent-based simulation & regression research
* Collected, organized, and regularly updated confidential data from government agencies for the grant application

**PROJECTS**

**Auto ML** April - May 2021

* Making an automated machine learning tool that acts as a guide through the ML process

**Validation Tool** April - May 2021

* Created a tool that performs a deeper validation than overall metrics (e.g., R2) in order to detect bias within a model

**Impact of Crisis Intervention Teams (CITs) on Arrest Rates**              June - September 2020

* Evaluated arrest rates in Chicago, IL after better access to mental health resources was provided

**Travel Ratings Magazine Article**             July 2017

* Wrote a (fake) magazine article giving purchasing tips by applying naive bayes analysis on flight purchases

**Fuzzification of General Unary Hypothesis Automation**           May 2010

* Tailored the fundamentals of GUHA data mining to allow the user to apply logical operators on fuzzy values

**CONFERENCE PRESENTATIONS**

**Computational CBDT:** Collective Dynamics of Complex Systems Research Group, Binghamton, NY March 2010

**Underlying Causes of Crime:** Binghamton Neighborhood Project Symposium, Binghamton, NY September 2008

**Virtual Binghamton:** SUNY Buffalo McNair Conference, Buffalo, NY           July 2008

**Gentrification in New York:** University of Maryland McNair Conference, College Park, MD       March 2008

**SKILLS**

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| --- | --- |
| **Programming Languages**  **Proficient:** Python | C# | Transact-SQL  **Working Knowledge:** MATLAB | **Python Libraries**  **Proficient:** Pandas | Scikit-learn  **Working Knowledge:** Numpy | NLTK | Pyspark | Plotly |
| **Technical Competencies**  Machine Learning | Analytics Model Development |  Software Engineering | Agile | **Soft Skills**  Communication | Emotional Intelligence | Leadership |
| **Integrated Development Environments**  Jupyter Notebook | SQL Server Management Studio |  Spyder | Visual Studio |  |