*AREAL TAL (ARI)* 39 Glen Street Cell: 516-554-6129 Page 1/2
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## SUMMARY

**Data Scientist** with a Masters in the applied quantitative sciences. Adept in designing & implementing data-based models. Enjoy visualization of data. Experience in Agile/Scrum environment. Lean Six Sigma certified.

## EDUCATION

**Binghamton University, State University of New York at Binghamton**
M.S., Systems Science, Watson School of Engineering and Applied Science, May 2011
Concentration: Intelligence Systems; Capstone: "Computational Recommendation System"; **GPA: 3.845**
B.A., Mathematics & Economics, Harpur College of Arts and Sciences, May 2009

## EXPERIENCE

**Memento, division of Financial Crime Management at FIS Global,** Burlington, MA
***Senior Data Scientist*** September 2012 – Present

- Building the *Wire Fraud* model with the Analytics team off of an existing prototype
- Served as the analytics expert for Engineering
- Stabilized & managed customer-facing and internal data requirements, as well as data validation among all products
- Researched and documented internals of an existing Memento *Check Fraud* analytics model
- Wrote tools & scripts to facilitate data generation & testing of analytics for each of our products; some favorites include the *Wire Analytics Test Harness* and the *Date Tracking Analytics Runner*
- Improved on the *Check Fraud* product's analytics through bug fixes of existing indicators; used MATLAB, C#, Python, and an XML-based language
- Trained software developers & QA to work on the *Check Fraud* analytics port and handle bugs
- Simplified the UI for *ACH Fraud* disposition while giving the user handles for grouped dispositioning; used JQuery & JavaScript
- Integrated automation of the *Suspicious Activity Report*, a FinCEN requirement for Bank compliance, into our *Fraud Manager* SharePoint application

**Taykey,** Herzliya, Israel
***Algorithm Engineer I*** December 2011 – June 2012

- Wrote statistical signal processing algorithms to automate core business decisions for a famous start-up
- Actuated an agent that crawls social media and parses relevant information from HTML imbued with JavaScript
- Developed an ad performance reporting system that allows the user to group sets of targets by demographic criteria
- Employed various data analytics via Python scripting to understand quality of data being retrieved
- Constructed data mining models to discover relationships between users and their interests
- Handled big data using combinations of SQL, Python, Awk, and CSV files

**Bloomberg L. P.,** New York, NY
***Financial Software Developer*** August – December 2010

- Trained in computer science and Bloomberg technologies in a full-time training course
- Wrote software applications for *The Terminal* (The Bloomberg)

## PROJECTS

**Fuzzy General Unary Hypothesis Automation (GUHA) Implementation**

- Implemented a fuzzy version of GUHA as a user friendly statistical software in C

**Bioengineering Senior Project**

- Designed *Smart Transportation* for efficient mass transport and developed technical design report & business plan

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## RESEARCH

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

Binghamton University Department of Economics
Binghamton University Department of Systems Science and Industrial Engineering

- Co-authored draft of "Computational Implementation of Case-Based Decision Theory"
- Tested CBDT agent quantitatively using simulation of Hill Climbing problem
  - See http://roboeconomic.us/cbsa, under Problem_Type choose FindWell, hit Setup, then hit Step repeatedly or hit Go
- Designed & Coded a simulated environment solving the "The Nanny Problem" for the CBDT agent using NetLogo
- Invented a recommendation system that follows CBDT, allowing for better utilization of data sets of multiple users

**Computational Binghamton** June 2008 – May 2009

Center of Applied Community Research and Development (CACRD), Binghamton, NY
Binghamton University Department of Economics
Binghamton University Department of Bioengineering
Binghamton University Geographic Information Systems (GIS) Core

- Applied agent based simulation & regression modeling to evaluate need for crime reduction grant
- Reported findings tied to underlying causes of clusters of crime to Weed & Seed Board, including chief of police
- Co-authored $1,000,000 grant application from Department of Justice utilizing my research
- Collected, organized, and regularly updated confidential data from government agencies for grant application

**Gentrification in New York** January – May 2008

Binghamton University Department of Economics, Binghamton, NY

- Modeled causes of urbanization across New York counties using SAS software with Census data

## 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

## CERTIFICATIONS & HONORS

Lean Six Sigma Green Belt; Lean Six Sigma Brown Belt
Alpha Pi Mu Industrial Engineering Honors Society Membership
Ronald E. McNair Scholar 2007 – 2009; Deans List Fall 2006 – Spring 2007; Xcel Student Leadership Certificate

## HOBBIES

Writing, Dancing, Hosting, and Health Kicks

## TECHNICAL SKILLS

Designed & implemented projects in **C**/**C++**/**C#**, **JavaScript**, **Python**, **MATLAB**, **JQuery**, and **Transact-SQL**
Implemented agent-based modules/simulations in **Python** and **NetLogo**
Implemented solutions in **Eclipse**, **Visual Studio**, and **SQL Server**
Wrote **XML** files to create rules for communication between software of different languages
Performed Lean Six Sigma statistical analysis using **Minitab**
Performed regression analysis and other quantitative research using **MATLAB**, **Microsoft Excel**, **SAS**, and **E-Views**
Basic familiarity with concepts in **Machine Learning**, **Hadoop**, **HBase**, **MapReduce**, and **Amazon Web Services**
Managed code with **SVN**, **GIT**, and **TFS**