Antonio Ramón Trani

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TECHNICAL SKILLS

Certifications: Secret-Level Security Clearance, ADDA Certified Mechanical Drafter, Certified Solidworks Associate

Languages: Python, JavaScript, SQL, HTML/CSS, C#, Fortran, Spin, Spanish (Fluent speaking/writing), German (Elementary speaking/writing)

Tools: Python Libraries (Pandas, Flask, Matplotlib), Matlab, Heroku, Docker, Tableau, Git, Autodesk Inventor, AutoCAD, Solidworks, Revit, NPSS, LabView, MS Visual Studio, LTspice, Google Earth, MS Office Programs

RELATED EXPERIENCE

Deloitte, Data Scientist, *(OSD contract),* Alexandria, VA April 2019-Present

- ➢ Compiled country and project data from open sources
- ➢ Aggregated data from open sources using Python, and created visualizations/graphs
- ➢ Automated creating Excel spreadsheets, pivot tables and other visuals using Python
- ➢ Created predictive linear regression and hidden-markov models using GDELT global event database
- ➢ Created predictive logistic regression model for country-level data
- ➢ Supported continual development and deployment of internal portfolio analysis web-app

Deloitte, Data Scientist, *(Navy contract)*, Rosslyn, VA October 2018-April 2019

- ➢ Profiled Navy aircraft work-order data sources in Python and SQL to find primary keys to merge data sources, and fields with collinearity
- ➢ Automated data profiling process in Python and SQL and exported results to Excel
- ➢ Developed client presentations for future predictive analytics capability using work-order data
- ➢ Updated software that was developed for the Navy in Python with new functionality at request of client
- ➢ Aggregated work-order data for use in root-cause analysis model for Navy

NAVAIR, Mission Analyst *(DP-0830-02),* Patuxent River, MD July 2017-September 2019

- ➢ Probabilistically modelled engagement-level scenarios for U.S. Navy using Monte-Carlo method
- ➢ Automated data archiving, compression, and data post-processing using Python and PostgreSQL
- ➢ Automated data presentation and graph creation using Python, Excel and Powerpoint
- ➢ Developed in-house flight scheduling tool for naval mission scenarios in Python
- ➢ Developed animations from scheduling results using matplotlib library
- ➢ Statistical fitting of modelled detection system data to create probability of detection over time curves

Virginia Tech Air Transportation Lab, Analyst/Programmer, Blacksburg, VA Summer 2012, 2013, 2015

- ➢ Developed proposal for new runway scheme to mitigate noise, created presentation for Chicago mayors
- ➢ Created noise contour maps from noise analysis data of Chicago O'Hare airport
- ➢ Tracked flights from O'Hare, used Matlab and Google Earth to create usage envelope
- ➢ Evaluated costs/benefits of satellite surveillance of Atlantic commercial flights, presented conclusions
- ➢ Parsed commercial flight path data using Matlab, wrote KML script to animate paths in Google Earth
- ➢ Created graphs, charts and maps in Matlab for presentation of model data

Leidos, Civil Engineering Technician, Blacksburg, VA March 2014-February 2015

- ➢ Improved existing tool in C# and created GUI to rate roadwork done by VDOT subcontractors
- ➢ Developed tool in Matlab to more efficiently draw data from Access and create failure reports.
- ➢ Developed tool in Matlab to generate random sampling of roadwork for analysis.

EDUCATION

University of Virginia, Charlottesville, VA

- B.S. with Distinction in Mechanical Engineering – Completed May 2017
- GPA: 3.56

ADDITIONAL EXPERIENCE

Crypto Trading Bot February 2018-Present

- ➢ Python bot draws data from crypto-currency exchanges GDAX, Bittrex, etc. using REST API
- ➢ Personally developed machine-learning algorithm informs bot which trades to make
- ➢ Bot is deployed to Heroku cloud service

GroupMe Bot December 2017-Present

- ➢ GroupMe Bot developed in Python to conduct Wikipedia, Google and social media searches
- ➢ Bot is deployed to Heroku cloud service

Chess Opening Move Practice Game March 2019-Present

- ➢ Chess game developed in Python using PyGame library
- ➢ Game recognizes common named opening lines and allows user to practice their accuracy

ACADEMIC/VOLUNTEER EXPERIENCE

Mathematical Contest in Modeling, Meritorious Winner February 2015

- ➢ Placed top 9% of 7637 Teams, represented Virginia Tech
- ➢ Developed mathematical model, simulated spread/treatment of Ebola virus in West Africa in Matlab
- ➢ Created plan to combat spread, quarantine/treat/vaccinate population through medical, mathematical, cost analysis

Washington Literary Society and Debating Union, Vice President September 2015-May 2017

- ➢ Recruited, mentored and taught public speaking and presentation skills to 60 new provisional members
- ➢ Represented Society in debates against Jefferson Society and International Relations Organization
- ➢ Organized weekly general body meetings, Officer Corps meetings, and recruitment events
- ➢ Organized and judged events co-sponsored by Charlottesville Debate League and UVA Debate

Great Mills High School, Debate Coach, Mock Trial Coach September 2017-Present

- ➢ Co-founded and coached GMHS debate team, co-coached GMHS mock trial team
- ➢ Taught presentation, case writing, research and public speaking skills to new members of both teams