

Matthew Jacobsen

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SKILLS

PROGRAMMING

Python and iPython Notebook
SQL
R

MACHINE LEARNING

Regression
Support Vector Machines
Naive Bayes
K-Nearest Neighbors
Decision Trees
Cluster Analyses
Natural Language Processing
Network Analyses

SOFTWARE

PostgreSQL
Spark and Hadoop
Git and Github
Origin
ANSYS (Finite Element Analysis)
Mathematica
ElasticStack

EDUCATION

IBM ADVANCED DATA SCIENCE SPECIALIST

COURSERA
January 2020

IBM DATA SCIENCE SPECIALIST

COURSERA
October 2019

PHD, PHYSICS

UNIVERSITY OF NEVADA LAS VEGAS
December 2010 | Las Vegas Nevada
Thesis: Measurement System for High Pressure Characterizations of Materials

LINKS

Google Sites: [matthew-k-jacobsen](#)
LinkedIn: [matthewjacobsen](#)

RECENT EXPERIENCE

INSTITUTE FOR DEFENSE ANALYSES | DATA SCIENTIST

Apr 2017 – Present | Alexandria, VA

- **Furnished Department of Defense senior leaders with insights, analytics, reports, and recommendations enabling effective Congressional oversight of military acquisition programs**
 - Developed algorithms based upon statistical analysis and data modeling to assess effectiveness, suitability, and survivability
 - Analyzed and processed complex data sets using advanced querying, visualization, and analytics tools
 - Identified, measured and recommended improvement strategies regarding development of oversight programs
- **Results:**
 - Enabled the effective use of over ten million dollars of test funding, generating comprehensive data products for analysis
 - Developed data analysis tool sets for use by other analysis, improving data quality and reducing analysis time from weeks to days
 - Generated insights speeding development of military computing systems, providing more capable systems for the warfighter

LOS ALAMOS NATIONAL LABORATORY | POSTDOCTORAL FELLOW

Mar 2014 – Mar 2017 | Los Alamos, NM

- **Led experimentation generating scientific results and analysis of materials for use in nuclear stockpile management**
 - Executed and analyzed experiments to enhance understanding of material behavior
 - Generated both closed- and open-source reports and presentations on research
 - Provided mentorship support for two graduate and three undergraduate students
- **Results:**
 - Generated over ten high-quality datasets for further use
 - Obtained funding amounting to seven hundred thousand dollars to support further research
 - Published a total of ten peer-reviewed papers and presented findings at five conferences

UNIVERSITY OF EDINBURGH | POSTDOCTORAL SCIENTIST

Mar 2012 – Mar 2014 | Edinburgh, Scotland, UK

- **Led research teams in the development of multiple new instrumentation technologies, based upon modelling and evidence-based design**
 - Generated four new instrumentation setups for use at large-scale central user facilities
 - Provided mentorship for three graduate and seven undergraduate students
- **Results:**
 - Published a total of four peer-reviewed papers and presented findings at three conferences
 - Developed multiple efficient finite-element models for efficient materials testing, reducing time to develop and implement instrumentation