ANTONY VAN der MUDE

131 Wingate Drive ● Hackettstown, New Jersey 07840
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DATA SCIENCE / MACHINE LEARNING / NATURAL LANGUAGE PROCESSING EXPERT

Highly knowledgeable Data Science / Machine Learning / Natural Language Processing Expert with wealth of experience developing applications for cybersecurity, educational software, speech recognition and customer data. Works equally well individually or as integral part of high performance team.

Software Development ● Data Science ● Machine Learning ● Natural Language Processing
Speech Recognition ● Artificial Intelligence ● Expert Systems

PROFESSIONAL EXPERIENCE

SECURITY SCORECARD, New York, New York ● 9/2015 to Present
Cybersecurity

Data Analyst
Member of Data Analysis team. Wrote natural language processing and machine learning applications in Python (pandas, nltk, numpy) to identify cybersecurity targets and social engineering risks.

Achievements:
- Implemented Named Entity Recognizer to identify company targets in Hacker Chatter, map WhoIs IP addresses and parse data breach reports to extract company and specifics of breach. Achieved less than 2.5% False Positive rate on identification.
- Developed Sentiment Analysis software for Twitter and Reddit to identify possible security problems.
- Defined metrics for risk of social engineering of companies due to unusual use of company emails.
- Used DBSCAN clustering analysis to classify hacker chatter and cluster companies by security risk.
- Constructed parser to identify breakable password hints through social engineering.

KNEWTON, New York, New York ● 3/2014 to 7/2015
Adaptive Educational Software

Senior Software Engineer
Member of Data Analytics/Dashboards team. Wrote Hadoop ETL programs and machine learning tools.

Achievements:
- Developed machine learning text classifier in python and C to categorize pages with educational content for possible inclusion into Knewton's educational taxonomy.
- Wrote jobs for Amazon's Elastic Map Reduce to load student interactions from Cassandra to Redshift.

ANTONY VAN der MUDE, LLC, Hackettstown, New Jersey ● 1/2005 to 3/2014
Computer consulting firm for military, medical and consumer products

President
Developed applications for Military, Medical and Consumer products. Led needs assessment meetings with managers and project leaders to define requirements and project schedules. Presented detailed Statements of Work, schedules, and budgets. Developed algorithms and software for device firmware and supporting tools, authored and ran acceptance tests, and assisted transition to manufacturing.

Achievements:
- Wrote Android Smart Battery app using machine learning to predict battery life based on actual usage.
- Facilitated $18M in sales for Navy by completing software development and delivering on-schedule.
- Authored firmware for user interface for Laryngoscope, used to diagnose diseases of the larynx.
- Developed software and performed statistical validation for infrared cameras for howitzer gun sights for military contract extending infrared technology into new applications.

AT&T LABS, Florham Park, New Jersey • 1/1999 – 12/2004
Research and Development

Member Technical Staff
Designed and rolled-out machine learning Algorithms, analyzed speech recognition accuracy, and delivered speech recognition and text to speech solutions for AT&T infrastructure.

Achievements:
- Developed data tuning techniques to bring groundbreaking "How May I Help You" customer service speech recognition from 80% to 98% accuracy by tuning ML models and doing performance analysis.
- Enhanced AT&T network capabilities through key contributions to speech recognition and text to speech software including long haul switches and local data centers.
- Facilitated successful development of machine learning models supporting outside customers for natural language Understanding applications for AT&T Speech Recognition products.

BELL TELEPHONE LABORATORIES, Holmdel, New Jersey • 9/1991 – 12/1998
Research and Development

Member of Technical Staff
Part of research and development team for maintaining the user experience of the Bell Telephone system. Built speech recognition and artificial intelligence prototypes for new AT&T services, conducted studies demonstrating accuracy and effectiveness. Provided advanced computer expertise and capabilities bolstering on-time project completion and performed statistical analysis on studies and data collection tasks.

Achievements:
- Developed software for gathering and analyzing data to optimize user experience that slashed need for computer automated call-processing infrastructure for phone system by 20%.
- Created and implemented essential tools for World Traveler automated voice messaging for international customers by developing maintenance and reporting tools for data processing servers.
- Facilitated launch of speech recognition and natural language application packages, bringing AT&T to leadership position in industry, through development of pioneering prototypes of new services.

EDUCATION
Master of Science in Computer Science
Rutgers University – New Brunswick, New Jersey
Bachelor of Science in Physics
Case Western Reserve University – Cleveland, Ohio

PUBLICATIONS / PRESENTATIONS
Patents #7,933,766, 7,620,550, 7,295,981 "Method for building a natural language understanding model for a spoken dialog system", Narendra Gupta, Mazin Rahim, Gokhan Tur and Antony Van der Mude.

TECHNICAL SKILLS
Machine Learning: Boosting, Support Vector Machines, k-Nearest Neighbor, DBSCAN, Bayesian
Natural Language: Adaboost, tf-idf, Named Entity Extraction, Parsing, Text Normalization
Other: Computer algorithms, Computer firmware, SQL and Oracle databases, UNIX internals
Languages: Python, C, Java, C++, Perl, Lisp

PROFESSIONAL ORGANIZATIONS / AFFILIATIONS
ACM – Association for Computing Machinery
IEEE – Institute for Electrical and Electronic Engineers
AAAI – American Association for Artificial Intelligence