

Data Scientist, Principal Engineer skilled in delivering strategic large-scale and early-stage projects, with particular attention to alleviating user and technology pain points. Experienced in driving new strategic business initiatives, delivering R&D POC designs, and developing client/vendor engagements. Proficient in building end-to-end analytical machine learning pipelines, comprised of processing both structured and unstructured data.

TECHNICAL SKILLS

Enterprise/Tools

- Apache Spark, Hadoop
- AWS EC2, EMR, S3
- SAS Enterprise Miner, Visual Analytics
- IBM BigInsights, SPSS, Bluemix, Watson
- Git, Perforce, ClearCase, SVN, PVCS
- Pivotal Tracker, Doors, Bugzilla

Data Analysis/Frameworks

- Postgres, MySQL, SQLite, MongoDB
- Jupyter, Zeppelin, RStudio, Rodeo
- IntelliJ, Eclipse, Spyder, IPython
- Sklearn, NLTK, GraphLab, OpenCV
- DL4J, TensorFlow, Keras
- D3.js, p5.js, Plotly

Programming/Platforms

- Python, R, Scala, Java
- SQL, C, C++, ARM, UML
- HTML, CSS, Markdown
- JavaScript, Node.js
- Bootstrap, Jekyll
- Linux, QNX, WinCE

PATENTS

- Interference Control in Wireless Communication; United States 9,357,404 | Issued May 2016
- Device Localization Based on a Learning Model; United States 14/311,077 | Filed Jun 2014

EDUCATION/CERTIFICATIONS

Udacity Self-Driving Car (SDC) Online Nanodegree Program	Nov 2016 – Present
Galvanize San Francisco, CA Data Science Immersive Bootcamp	Jun 2016 – Aug 2016
Data ScienceTech Institute (DSTI) Paris, France MS Data Science (Select Courses)	Oct 2015 – May 2016
General Assembly San Francisco, CA Part-Time Data Science Program	Oct 2014 – Dec 2014
Lehigh University Bethlehem, PA B.S. Electrical Engineering (EE)	Aug 1995 – May 1999

EXPERIENCE

Techstars IoT | New York City, NY July 2017 – Present

Technologist in Residence (TIR)

Responsible for advising several Accelerator Venture Companies in advancing their Pilot and Product designs

- Lead Technical Company Mentoring Sessions and Weekly Group Discussions
- Advise companies in Systems Architecture, Benchmarking and Scaling (via Apache Spark) their solution
- Advance Company Product Offerings via solving or reducing bottlenecks and pain points in the data pipeline, further streamlining their solution to reduce errors and executing on multiple concurrent pilots

SkyMind | San Francisco, CA May 2017 – Present

Deep Learning Consultant – Training, Field Engineering

Responsible for improving the Deep Learning for Java (DL4J) Framework

- Develop Customer PoC Computer Vision designs utilizing the DL4J Suite per detection and tracking scenarios
- Create and Present enhanced Distributed DL4J Workshop/Conference Session Training Content, further engaging with the community and offering an improved streamlined learning experience

Otto (Tyto Life) | San Mateo, CA Mar 2017 – Jun 2017

Data Scientist & Engineering Advisor – Product Division

Responsible for enhancing the Connected Home Access Control consumer experience

- Drive data acquisition, measurement, and data science strategy for sensor (BLE, Radar) data across a variety of unit installation environments. Initial analysis is performed off-device (Python) while deployment is implemented on-device in firmware (C) via use of ARM Cortex-M (CMSIS) DSP library.
- Improve device/pedestrian detection confidence via denoising and smoothing RF sensory inputs
- Provide ETL and aggregate statistical analysis per factory unit yield production and productivity rates

Inria Research Institute | Sophia Antipolis, France*Jan 2016 – Apr 2016**Research Assistant – STARS (Spatio-Temporal Activity Recognition Systems) Research Team*

Responsible for improving Computer Vision semantic scene interpretations per healthcare diagnosis for the elderly

- Applied traditional Computer Vision techniques and Deep Learning CNN architectures per segmented region classifications for semantic ontology event activity recognition representations and analysis
- Enhanced event scenario recognition models resulting in improved accuracy detection, reducing false positives via accounting for relaxed temporal constraints and prior contextual states
- Improved classification object region inference via model architecture fine-tuning and optimization

Nagra Kudelski Group | San Francisco, CA*Sep 2012 – May 2015**Software Expert – Group Innovation & Incubation*

Responsible for future technology & application advancements within an agile R&D Innovation Group

- Initiated proposals per Intellectual Property (IP), creation of patents, and formation of new business units
- Successfully executed special project research technology directives to assess portfolio value-add
- Formulated new strategic partner vendor relationships to strengthen Digital TV and Public Access sectors
- Led Proof of Concept (POC) designs centered on long-range distance detection, achieving similar results to Active RFID (100m+) via a disposable low cost Battery-Assisted Passive (BAP) RFID design

Sportvision | Mountain View, CA*Oct 2011 – Apr 2012**Special Projects/Embedded Software Consultant – Office of CTO, Motorsports Division*

Responsible for advising enhancements of NASCAR Trucks vehicle tracking prototype per broadcast media

- Advised the vehicle tracking and sensory measurement migration from Computer Vision detection to GPS IMU enabled localization to improve accuracy during challenging weather conditions
- Successfully delivered customized Embedded Linux Kernel and Root Filesystem (RFS) distribution to improve stability and performance of predecessor system, notably reducing crashes, latency, and boot-time
- Introduced new mechanisms per critical health diagnostic detection and image upgrades during race day

Broadcom | Sunnyvale, CA*Feb 2011 – Oct 2011**Principal Engineer – Systems Engineering, Cellular Division*

Responsible for WiMAX and LTE radio network driver systems software architecture mobile reference designs

- Directed technology teams per mobile platform processor architectures, requirements and integration of vendor Voice over LTE (VoLTE) stack in aligning with roadmap features
- Facilitated multi-site coordination per customer (RIM) migration platform architecture from Linux to QNX to achieve successful WiMAX Certification

Qualcomm | Raleigh, NC*Aug 2007 – Jan 2010**Staff Engineer – Computing & Consumer Division*

Responsible for Windows Mobile board support package (BSP) Snapdragon ARM Cortex based reference designs

- Initiated cross-disciplinary multi-site technology reviews to assess processor requirements, identify next generation features, and improve upon current reference design implementations
- Advised OEMs in reference design architecture, custom BSP feature development, and best practices in achieving Third-Party Windows Mobile OS Logo Certification
- Enhanced systems performance initiatives, further optimizing boot time, performance monitors, and latency

Additional Prior Experiences:

TapRoot Systems | Morrisville, NC | Principal Engineer/Lead – Mobile Products & Services

Jul 2003 – Aug 2007

Panasonic Mobile Communications | Suwanee, GA | Senior Engineer – Mobile Platforms

Apr 2000 – Jul 2003

Verizon Wireless | Plymouth Meeting, PA | RF Engineer – Systems Performance

Sep 1999 – Feb 2000