

*Data Scientist, Principal Engineer* skilled in delivering strategic large-scale and early-stage projects, with particular attention to alleviating pain points, deriving business insights, and expressing engaging narratives. Experienced in driving new strategic business initiatives, producing R&D POC designs, and scaling machine learning experiments.

## TECHNICAL SKILLS

- Apache Spark, Hadoop
- Cassandra, Elastic Search, Hive
- Postgres, Neo4j, MongoDB, MySQL
- IBM SPSS, BigInsights, Bluemix
- SAS Enterprise Miner, Visual Analytics
- Git, Perforce, ClearCase, SVN, PVCS
- JIRA, Pivotal Tracker, Bugzilla, Doors
- DL4J, TensorFlow, Keras
- Sklearn, NLTK, OpenCV
- Jupyter, Zeppelin, RStudio
- IntelliJ, Eclipse, Spyder, IPython
- AWS, MSFT Azure, Google GCP
- Flask, Play Framework
- D3.js, p5.js, Plotly
- Scala, Java, Python, R
- SQL, C, C++, UML, ARM
- JavaScript, Node.js
- HTML, CSS
- Maven, SBT
- 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) Nanodegree (1+ Terms) *Nov 2016 – Apr 2017*
- Galvanize (San Francisco, CA) | Data Science Immersive Bootcamp *Jun 2016 – Aug 2016*
- Data ScienceTech Institute (Paris, France) | MS Data Science (Select Courses) *Oct 2015 – May 2016*
- Lehigh University (Bethlehem, PA) | B.S. Electrical Engineering (EE) *Aug 1995 – May 1999*

## EXPERIENCE

**JP Morgan Chase (JPMC) | Manhattan, NY** *Nov 2017 – Present*

*Data Scientist – Digital Intelligence | Consumer and Community Banking (CCB)*

Responsible for improving the consumer personalization experience and suggestive nudges for Chase Products

- Develop scalable implicit ranking recommendation ML Tuned Models (via Apache Spark, Scala, ML Pipelines) for *Chase Ultimate Rewards* encompassing spending propensity and latent factor likewise redemptions
- Engage with LOB's to deliver personalized engagement insights, launching and monitoring deployed Chase card acquisition message underwriting and targeted ad spending-based *Campaigns*
- Improve the *Suggestive Nudges* for *Savings* via tuning for the underlying Distributed Neighborhood Model

**SkyMind | San Francisco, CA** *May 2017 – Present*

*Deep Learning Consultant – Field Engineering, Training Education*

Responsible for improving the Deep Learning for Java (DL4J) Suite for Public and Vendor consumption

- Develop Deep Learning vendor engagement feasibility studies per improving existing POC implementations for industrial automotive computer vision welding detection event scenarios
- Develop POC Java modules demonstrating the SkyMind Intelligence Layer (SKIL) Model Serving capabilities from deployed SSD CNN and LSTM native TensorFlow trained models for a large home-repair retailer vendor
- Present and create tailored learning DL4J suite content for enterprise partner vendor and public workshops

**Techstars | Manhattan, NY** *July 2017 – Oct 2017*

*Technologist in Residence (TIR) – IoT Accelerator Vertical*

Responsible for advising several Entrepreneurial Ventures in advancing their Pilot & Product IoT/M2M designs

- Advance company product offerings via solving or reducing bottlenecks and pain points in their data pipeline, further allowing for execution across multiple concurrent pilots
- Advise companies in systems architecture, benchmarking and scaling (via Apache Spark) their solution
- Lead technical company mentoring sessions and weekly group discussions

**Otto (Tyto Life) | San Mateo, CA**

Mar 2017 – Jun 2017

*Data Scientist & Engineering Advisor/Consultant – Product Division*

Responsible for enhancing the Connected Keyless Home Access Control consumer experience

- Drive data acquisition, measurement, and data strategy for secure sensor (BLE, Radar) door access, consisting of off-device (Python) and on-device deployment firmware (C) via ARM Cortex-M CMSIS DSP Library
- Improve pedestrian detection confidence via denoising and smoothing RF sensory inputs via Kalman Filters
- 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 detection inference via model layer architecture fine-tuning and optimizations

**Nagra Kudelski Group | San Francisco, CA**

Sep 2012 – May 2015

*Software Expert – Group Innovation & Incubation*

Responsible for future technology &amp; application advancements within an agile R&amp;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 POC low-cost RFID BAP long-range distance detection (100m+) designs in theme parks and ski resorts

**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 a customized Embedded Linux Kernel and Root Filesystem (RFS) distribution to improve stability and performance of predecessor system, notably reducing system 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 product roadmap features
- Led multi-site WiMAX Certification vendor migration platform architecture from Linux to QNX

**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 technology reviews to assess and improve BSP reference architecture designs
- Enhanced systems performance initiatives, further optimizing boot time, performance monitors, and latency
- Advised OEMs in reference design architecture, feature development, and Windows Mobile Logo Certification

**Additional Prior Experiences:**

TapRoot Systems (Morrisville, NC) | Principal Engineer/Lead – Mobile Products &amp; 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