
Data Scientist, Principal Engineer skilled in delivering strategic large-scale and early-stage projects, with particular attention to alleviating pain points and deriving business insights. Experienced in driving new strategic business initiatives, developing client/vendor engagements, and delivering R&D POC designs. Proficient in building end-to-end distributed 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

- Scala, Java, Python, R
- 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 (1+ Terms)	<i>Nov 2016 – April 2017</i>
Galvanize San Francisco, CA Data Science Immersive Bootcamp	<i>Jun 2016 – Aug 2016</i>
Data ScienceTech Institute (DSTI) Paris, France MS Data Science (Select Courses)	<i>Oct 2015 – May 2016</i>
General Assembly San Francisco, CA Part-Time Data Science Program	<i>Oct 2014 – Dec 2014</i>
Lehigh University Bethlehem, PA B.S. Electrical Engineering (EE)	<i>Aug 1995 – May 1999</i>

EXPERIENCE

JP Morgan Chase (JPMC) | New York City, NY

Nov 2018 – 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 recommendation ML Models (via Apache Spark and ML Pipelines) for *Chase Ultimate Rewards* via spending propensity and latent factor likewise redemptions, influencing business operations
- Engage with LOB's to deliver personalized engagement insights, launch and monitor deployed Chase card acquisition message underwriting and targeted ad spending-based *Campaigns*
- Establish scalable module platform components (via Scala, Apache Spark), comprised of an experiment structure tracking data lineage

SkyMind | San Francisco, CA

May 2017 – Present

Deep Learning Consultant – Field Engineering, Training

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

- Develop Vendor engagement feasibility studies per improving existing Deep Learning implementations for Industrial Automotive computer vision detection event scenarios
- Develop client POC applications to demonstrate the SkyMind Intelligence Layer (SKIL) Model Serving capabilities from deployed CNN and LSTM native TensorFlow trained models for a large Home-Repair retailer vendor
- Enhance and present tailored training workshop material, further engaging with Partners and the community, offering a more informative product offering takeaway

Techstars | New York City, 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

- 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 their data pipeline, further streamlining their solution to reduce errors and executing on multiple concurrent pilots

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 optimizations

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 around 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 a 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 product roadmap features
- Facilitated multi-site coordination per vendor 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