

Accomplished Machine Learning centric professional skilled in delivering strategic early-stage and large-scale projects, aligning technology delivery with business strategy and initiatives, while expressing compelling narratives. Results focused thought leader, with expertise spanning data strategy, scalable machine intelligence and infrastructure development, client relationship management, and cross-functional team leadership. Experienced across multiple industries in Natural Language, Computer Vision, and Reinforcement Learning.

## EXPERIENCE

### ThoughtWorks | Manhattan, NY

Sep 2018 – Present

#### Principal Data Scientist – Professional Services (PS)

Shape portfolio offerings and capabilities in machine intelligent solutions and infrastructure, accelerate business opportunities and early-stage demand pursuits, and provide clients with quality strategic scalable deliverables

- Facilitate data and machine learning strategy, design, architecture, and technology stack selection in modernizing customer data initiatives in evolving their product roadmap maturity
- Improve order optimization recommendations of Supply Chain Lube Oil & Gas demand forecasting and MIP (Mixed Integer Programming) transformation to the cloud
- Lead development in improving contextual machine intelligence solutions per Natural Language Processing (NLP) use cases in contextual enterprise search, document clustering & classification, entity recognition, and content governance collaboration for continuous high-fidelity training data in model analysis
- Co-develop numerous discovery client strategy workshops, guide technical assessments in client acquisitions, followed by delivery engagements, aligning technical delivery with customer business outcomes

### SkyMind | San Francisco, CA

May 2017 – Oct 2019

#### Deep Learning Engineer Consultant – Solutions Architecture

Advance the development and maturity of Pathmind Deep Reinforcement Learning (RLlib, Gym, AnyLogic), Deep Learning for Java (DL4J) Algorithm Suite, and SkyMind Intelligence Layer (SKIL) Model Infrastructure Platform

- Facilitate business development and technical solution architecture client partnership engagements to improve product development and industry technology adoption of Deep Learning based solutions
- Develop customer feasibility studies and POCs per industrial automotive computer vision multimodal welding detection, high cardinality chatbot NLP models via BERT, and SKIL native Model Serving (TF, Keras, DL4J, ONNX)
- Present and create tailored workshop content for enterprise customers, industry partners, and public events

### JP Morgan Chase (JPMC) | Manhattan, NY

Nov 2017 – Aug 2018

#### Data Scientist – Digital Intelligence, Consumer and Community Banking (CCB)

Enhance the consumer personalization experience and recommended insights for Chase Products across the full model management regulated lifecycle, from experimentation to launch

- 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 insights, launching and monitoring deployed Chase card acquisition message underwriting and targeted ad spending-based *Campaigns*
- Improve the suggestive *Nudges* for *Savings Acquisition and Engagement* towards customer financial health

### Techstars | Manhattan, NY

July 2017 – Oct 2017

#### Technologist in Residence (TIR) – Venture Accelerator, IOT Division

Advise several seed entrepreneurial startup ventures in advancing their product pilot IoT & M2M designs

- Advance startup venture product and service roadmap offerings, accelerate the execution across multiple concurrent customer pilots, and reduce technology and user performance bottleneck pain points
- Advise companies in systems architecture, benchmarking and scaling their existing solution with more modern distributed data technology computational solutions
- Lead technical venture mentoring and brainstorming sessions in technology adoption and design hurdles

**Otto LLC (formerly Tyto Life) | San Mateo, CA***Mar 2017 – Jun 2017**Data Scientist & Engineering Advisor/Consultant – Product Division*

Design the data acquisition, measurement, and pedestrian pattern detection for the keyless secure door access control in residential and corporate environments

- Develop Kalman filter RF denoising sensory input (BLE, Radar) and ML detection algorithms for pedestrian access, via off-device (Python) training and on-device deployment firmware (C) via ARM Cortex-M CMSIS DSP
- Perform aggregate statistical analysis insights for 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*

Advance the research of computer vision semantic scene interpretation of healthcare diagnosis for the elderly

- Apply both traditional computer vision and deep learning CNN architectures per semantic segmentation classification and ontology event activity recognition representations for analysis
- Enhance ontology event scenario recognition models resulting in improved accuracy detection, reducing false positives via accounting for relaxed temporal constraints and prior contextual states
- Improve object detection outcomes via model architecture fine-tuning and model architecture optimization

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

Advance Technology and Application innovation for business units, pitching new special project research directives to the executive board, prototype solutions for product feasibility and adoption for portfolio value-add

- Initiate proposals per Intellectual Property (IP), creation of patents, and formation of new business units
- Formulate new strategic partner vendor relationships to strengthen Digital TV and Public Access sectors
- Lead low-cost RFID BAP long-range distance pedestrian detection (100m+) pilots in theme parks and ski resorts

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

Boost robustness and accuracy detection for the NASCAR truck series broadcast media vehicle and sensory tracking measurement in migration from computer vision to GPS IMU localization 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
- Develop new subsystems for critical health diagnostic detection and OTA image upgrades during race day

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

Design and architect systems software for the WiMAX and LTE radio network mobile reference designs

- Evolve the mobile platform processor architecture, requirements and integration of Voice over LTE (VoLTE) radio stack into Broadcom reference designs and customer product roadmaps
- Lead multi-site WiMAX Certification client (RIM) OS platform migration architecture efforts from Linux to QNX

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

Improve the launch, development, and engineering releases of Windows Mobile board support package (BSP) Snapdragon ARM Cortex based reference designs

- Initiate cross-disciplinary technology reviews to assess and improve BSP reference architecture designs
- Enhance systems performance initiatives, further optimizing boot time, performance monitors, and latency
- Advise OEMs in reference design architecture, feature development, and Windows Mobile Logo Certification

**Additional Prior Experiences:**

TapRoot Systems (Morrisville, NC), Principal Engineer – 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 – RF Systems Performance

*Sep 1999 – Feb 2000*

## ADVISORY BOARDS

Big Data Professional Program, Rutgers University Center of Innovation Education

*Oct 2018 – Present*

## PROFESSIONAL AFFILIATIONS

The Institute for Ethical AI & Machine Learning

*Oct 2019 – Present*

## PATENTS

- Interference Control in Wireless Communication; United States 10075963
- Device Localization Based on a Learning Model; United States 9681270

*May 2016*

*June 2017*

## EDUCATION AND CREDENTIALS

Design Thinking Professional Program, Rutgers Innovation (New Brunswick, NJ)

*June 2019*

Big Data Professional Program, Rutgers Innovation (New Brunswick, NJ)

*May 2019*

Self-Driving Car (SDC) Nanodegree, Udacity (Online) – 1+ Terms

*Nov 2016 – Apr 2017*

Data Science Immersive Bootcamp, Galvanize (San Francisco, CA)

*Jun 2016 – Aug 2016*

MS Data Science, Data ScienceTech Institute (Paris, France) – Select Courses

*Oct 2015 – May 2016*

B.S. Electrical Engineering (EE), Lehigh University (Bethlehem, PA)

*Aug 1995 – May 1999*

## TECHNICAL SKILLS

- TensorFlow, PyTorch, Keras, DL4J, ONNX, RLlib, OpenGym
- Sklearn, Spacy, NLTK, Gensim, OpenCV, H2O, Anaconda
- Elasticsearch (ELK), Apache Solr, Apache Lucene
- Jupyter, Colab, Zeppelin, RStudio, IntelliJ, Eclipse, PyCharm, VSCode
- MLflow, DVC, Apache Airflow, Apache Oozie
- Cassandra, MongoDB, Neo4J, Postgres, MySQL
- IBM Cloud, IBM Rational, SAS Enterprise, Databricks
- Apache Spark, Riselab Ray, Hadoop, Hive
- Apache Kafka, Spark Streaming, Cloud PubSub
- Amazon AWS, Google GCP, MSFT Azure
- Python, Scala, Java, R, SQL, C, C++, JS, Node, D3, HTML, CSS
- Git, Perforce, Clearcase, SVN, PVCS, Jira, Bugzilla, Pivotal
- Linux, QNX, Android, Windows Phone
- Bazel, Maven, SBT, CMake, Make, Docker
- Tableau, Kibana, Grafana, Prometheus