

## ARI KAMLANI

**Principal Data Scientist, ML Engineer, Technology Strategist**  
Manhattan, NY

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Accomplished AI & Machine Learning (ML) centric professional skilled in delivering strategic early-stage and large-scale research project initiatives, aligning technology delivery with business strategy objectives. Results focused thought leader with expertise spanning ML strategy, scalable machine intelligence algorithms and infrastructure, cross-functional team leadership, and partner relationships. Experienced across multiple domains, particularly within Natural Language (NLP), Computer Vision (CV), and Reinforcement Learning (RL) via Simulation Modeling.

### EXPERIENCE

#### ThoughtWorks | Manhattan, NY

Sep 2018 – Jan 2020

*Principal Data Scientist – Professional Services (PS)*

Shape portfolio offerings and capabilities in machine intelligent solutions and infrastructure, accelerate business opportunities per early-stage inbound pursuits, and co-lead numerous discovery and design workshop sessions

- Led strategic developments in improving and extending natural language enterprise intranet search relevancy ranked queries incorporating semantic embedding vector analysis, entity linking, and query disambiguation, accompanied with Content Governance monitoring and annotation tooling for new onboarded data content
- Improved predictive contextual NLP models per document classification, coreference resolution, and semantic search ranking to reduce ambiguity and false detection rates within home mortgage loan claims, legal case briefs, and police misconduct allegation complaints
- Advanced Supply Chain Lubricant global product inventory optimization stock replenishment decision modeling via demand forecasting of safety stock with truck packing and delivery optimization solver constraints

#### Pathmind (formerly Skymind) | San Francisco, CA

May 2017 – Oct 2019

*Deep Learning Engineer Consultant – Solutions Architecture*

Develop and champion products per Deep Reinforcement Learning (Pathmind) decision modeling, Deep Learning for Java (DL4J) algorithm suite, and Machine Infrastructure Platform (SKIL) for industry technology adoption

- Facilitated business development in technical solutions architecture, client partnership engagements, partner benchmarking optimizations (Intel Xeon), and delivered custom enterprise training workshop sessions
- Migrated an NLP conversational dialogue system from a Seq2Seq BiLSTM to a fine-tuned Transformer distilled architecture (BERT) with downstream models decoding high cardinality utterances to manageable intents
- Created robust Image Captioning TensorFlow network architecture models to semantically match natural language query intents to description rankings, imported and natively served by the SKIL JVM runtime
- Developed feasibility studies and prototypes per industrial automotive multimodal computer vision welding detection scenarios characterizing poor abnormal welding joint performance of robotic arm movements

#### 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, primarily utilizing Apache Spark, for Chase Products and Services across the full regulated and governed modeling lifecycle

- Developed scalable implicit ranking recommendation ML Tuned Models for Chase Ultimate Rewards encompassing customer redemptions and spending propensity patterns
- Partnered with line of businesses (LOB's) to deliver personalized insights, launching and monitoring deployed Chase card acquisition FOMO message underwriting and targeted Ad spending-based Campaigns
- Improved the suggestive Nudges for Savings Acquisition and Engagement towards customer financial health based on custom neighborhood models at distributive scale

**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 &amp; M2M designs

- Advanced startup venture product ML roadmap offerings, improving solutions to accelerate the execution across multiple concurrent customer pilots and reduce technology and performance bottleneck pain points
- Advised companies in systems architecture, benchmarking and scaling their existing solution with more modern distributed and low latency data technology computational solutions (Apache Spark, Apache Kafka)
- Led 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

- Developed Kalman filter RF denoising sensory inputs (BLE, Radar) and ML detection algorithms for pedestrian access, via off-device training and on-device deployment firmware (C) via ARM Cortex-M CMSIS DSP
- Performed aggregate statistical analysis insights, improving 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

- Applied both traditional computer vision and deep learning CNN architectures per semantic segmentation classification and offline ontology event activity scene understanding recognition representations for analysis
- Enhanced ontology event scenario recognition models resulting in improved accuracy tracking detection, reducing false positives via accounting for relaxed temporal constraints and prior contextual states
- Improved object detection recognition outcomes via model architecture fine-tuning and 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, research &amp; prototype solutions for product feasibility and adoption for portfolio value-add

- Initiated proposals per Intellectual Property (IP), creation of patents, and formation of new business units
- Formulated new strategic partner vendor relationships to strengthen Digital TV and Public Access sectors
- Led initiatives to create new business and revenue opportunities around low-cost RFID BAP long-range pedestrian distance (300m+) detection and localization pilots in theme parks and ski resorts

**Prior Experiences – (Reference LinkedIn for details)**

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|----------------------------------------------------------------------------------|---------------------|
| ▪ Sportvision, Special Projects Consultant – Office of CTO, Motorsports Division | Oct 2011 – Apr 2012 |
| ▪ Broadcom, Principal Engineer – Systems Engineering, Cellular Division          | Feb 2011 – Oct 2011 |
| ▪ Qualcomm, Staff Engineer – Computing and Consumer Division                     | Aug 2007 – Jan 2010 |
| ▪ TapRoot Systems, Principal Engineer – Mobile Products & Services               | Jul 2003 – Aug 2007 |
| ▪ Panasonic Mobile Communications, Senior Engineer – Mobile Platforms            | Apr 2000 – Jul 2003 |
| ▪ Verizon Wireless, RF Engineer – RF Systems Performance                         | Sep 1999 – Feb 2000 |

**PROFESSIONAL AFFILIATIONS**

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|----------------------------------------------------------------------------------|---------------------|
| ▪ Manning Publications, Content Advisor and Reviewer                             | Apr 2020 – Present  |
| ▪ The Institute for Ethical AI & Machine Learning, Contributing Member           | Oct 2019 – Present  |
| ▪ Rutgers Center of Innovation Education Big Data Program, Advisory Board Member | Oct 2018 – Jan 2020 |

**PATENTS**

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|--------------------------------------------------------------------------|-----------|
| ▪ Device Localization Based on a Learning Model; United States 9681270   | June 2017 |
| ▪ Interference Control in Wireless Communication; United States 10075963 | May 2016  |

## EDUCATION, CERTIFICATIONS, AND CREDENTIALS

▪ Certificate, Deep Reinforcement Learning Nanodegree, Udacity (Online)	<i>Apr 2020 – In Progress</i>
▪ Certificate, Design Thinking, Rutgers Innovation (New Brunswick, NJ)	<i>June 2019</i>
▪ Certificate, Big Data Strategy, Rutgers Innovation (New Brunswick, NJ)	<i>May 2019</i>
▪ Certificate, Self-Driving Car Nanodegree, Udacity (Online) – 1+ Terms	<i>Nov 2016 – Apr 2017</i>
▪ Certificate, Data Science Immersive Bootcamp, Galvanize (San Francisco, CA)	<i>Jun 2016 – Aug 2016</i>
▪ M.S. Data Science, Data ScienceTech Institute (Paris, France) – Select Courses	<i>Oct 2015 – May 2016</i>
▪ B.S. Electrical Engineering (EE), Lehigh University (Bethlehem, PA)	<i>Aug 1995 – May 1999</i>

## TECHNICAL SKILLS

- **Languages:** Python, Scala, Java, R, SQL, JS, D3, Node, HTML, CSS, C, C++, ARM Assembler
- **Agile Project Tracking:** Jira, Pivotal Tracker, Basecamp, Bugzilla, Trello
- **Cloud Services:** Amazon AWS, Google GCP, MSFT Azure, IBM Cloud, Databricks, SAS Enterprise
- **Distributed Compute:** RISELab Ray, Apache Spark, Apache Hive, Apache Hadoop
- **Machine Learning Frameworks:** TensorFlow, PyTorch, Keras, DL4J, ONNX, Scikit-learn, Facebook FAISS, NMSLib, FBProphet, Hugging Face Transformers, spaCy, NLTK, Gensim, OpenNLP, OpenCV, RISELab RLlib, OpenAI Gym
- **Visual Analytics:** Tableau, Kibana, Grafana, Prometheus
- **Development Environments:** Jupyter, Colab, Zeppelin, RStudio, IntelliJ, Eclipse, PyCharm, VSCode
- **MLOps:** MLflow, DVC, Apache Airflow, Apache Oozie, Docker
- **Discovery, Storage:** Elasticsearch (ELK), Apache Solr, Cassandra, PostgreSQL, MongoDB, MySQL, Neo4J
- **Streaming Engines:** Apache Kafka, Apache Spark Streaming, Cloud PubSub
- **GitOps, CI/CD:** Git, Perforce, Clearcase, SVN, PVCS, Make, Maven, SBT, Bazel, Travis CI, Jenkins, GoCD