ARI KAMLANI

Principal Data Scientist, ML Engineer, Technology Strategist

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Accomplished AI & Machine Learning (ML) centric professional skilled in leading strategic early-stage and large-scale research project initiatives, aligning technology success and delivery with business strategy objectives. Growth-focused cross-functional technical leader with expertise spanning machine intelligence research and strategy, scalable algorithm and infrastructure development, managing partner relationships, and designing workshop instructional programs. Possess advanced experience across multiple domains, in classical machine learning and deep learning, particularly within Natural Language (NLP), Computer Vision (CV), and Reinforcement Learning (DRL) 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 ranking queries incorporating semantic embedding vector analysis, entity linking, and query disambiguation, accompanied with Content Governance monitoring and annotation tooling for new onboarded data content
- Developed 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 complaint use cases
- Enhanced Supply Chain Lubricant 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) via (AnyLogic, Ray, RLlib) decision modeling, Deep Learning for Java (DL4J) algorithm suite, and Machine Infrastructure Platform (SKIL) for industry technology adoption

- Enabled business development in technical solutions architecture, client partnership engagements, partner benchmarking optimizations (Intel Xeon), and delivery of 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
- Constructed robust Image Captioning TensorFlow network architecture models to semantically match natural language query intents to description rankings, imported and served natively 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)

Strengthen the consumer personalization experience, providing scalable recommended insights via Apache Spark for *Chase Products and Services* across the full regulated and governed modeling lifecycle

- Crafted and developed scalable implicit machine intelligent ranking recommendation 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

Acted as an advisor to several seed entrepreneurial startup ventures in advancing their product pilot IoT & M2M designs to scale for their next round of funding

- Progressed 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
- Functioned as an advisor 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

Headed the design, 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 (Python) 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

Strengthen 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
- Achieved enhancements to 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, in addition to researching & prototyping solutions for product roadmap feasibility and adoption for further portfolio value-add

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

Prior Work Experiences

- 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

- 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

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

EDUCATION AND CREDENTIALS

Education

- M.S. Data Science, Data ScienceTech Institute (Paris, France) – Select Courses — *Oct 2015 – May 2016*
- B.S. Electrical Engineering (EE), Lehigh University (Bethlehem, PA) – Degree — *Aug 1995 – May 1999*

Certifications

- Deep Reinforcement Learning, Udacity Nanodegree (Online) — *Apr 2020 – In Progress*
- Design Thinking, Rutgers Center for Innovation Education (New Brunswick, NJ) — *June 2019*
- Big Data Strategy, Rutgers Center for Innovation Education (New Brunswick, NJ) — *May 2019*
- Self-Driving Car, Udacity Nanodegree (Online) – 1+ Terms — Nov 2016 – Apr 2017
- Data Science Immersive Bootcamp, Galvanize (San Francisco, CA) — *Jun 2016 – Aug 2016*

TECHNICAL SKILLS

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