ARI KAMLANI

AI & ML Leader, Principal Data Scientist

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Accomplished AI & Machine Learning (ML) professional skilled in leading strategic early-stage and large-scale machine intelligence algorithmic and infrastructure solution enterprise program initiatives, aligning technology success and delivery with business objectives. A cross-functional technology leader driving effective decision making, delivering high-impact value propositions, de-risking product roadmap deliverables, and managing partner relationships. Possess considerable experience executing across multiple domains, in both classical and deep learning machine intelligence, creating personalized trustworthy Responsible AI solutions incorporating structured and unstructured Natural Language (NLP), Computer Vision (CV), and Reinforcement Learning (RL) aspects.

EXPERIENCE

ThoughtWorks | Manhattan, NY *2018 – 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, prioritize and guide the transformation of roadmap investments, grow the AI capabilities of the Organization, and co-lead numerous discovery and delivery workshop sessions

- Led strategic developments in contextual natural language enterprise intranet search ranking QA information retrieval (IR) incorporating user query disambiguation, semantic embedding vector analysis, and entity linking, accompanied with Content Governance monitoring and annotation tooling for new onboarded content
- Advanced classical and deep learning contextual NLP document topic and multi-label classification models incorporating NER, coreference resolution, and semantic matching to reduce ambiguity and false detection rates within home mortgage loan claims, legal case briefs, and police misconduct allegation client use cases
- Optimized supply chain lubricant distributor inventory stock replenishment decision modeling via anomaly detection, safety stock demand forecasting, and truck packing/delivery convex solver optimization constraints

Pathmind (formerly Skymind) | San Francisco, CA *2017 – 2019*

Deep Learning Engineer Consultant – Solutions Architecture

Create and champion products per Deep Reinforcement Learning (Pathmind) via (AnyLogic, Ray, RLlib) decision sequence modeling, Deep Learning for Java (DL4J) algorithm suite, and Machine Infrastructure Platform (SKIL)

- Enabled business development in technical solutions architecture, client partnership engagements, partner benchmarking optimizations (Intel Xeon), and delivery of custom enterprise training workshop sessions
- Boosted performance of conversational dialogue agents in transitioning from an BiLSTM Seq2Seq architecture to a knowledge distilled Transformer architecture family (BERT as NLU Encoder) with downstream models decoding high cardinality intents from large distributions of customer utterances
- 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 *2017 – 2018*

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

Strengthen the consumer and small business 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 for branded offers
- Partnered with line of businesses (LOB) to deliver personalized insights, launching and monitoring deployed Chase card acquisition FOMO message underwriting and targeted *Ad spending-based Campaigns*
- Led efforts in improving the suggestive *Nudges* for *Savings Acquisition and Engagement* towards customer financial health based on custom neighborhood models at distributive scale

Techstars | Manhattan, NY *2017 – 2017*

Technologist in Residence (TIR) – Venture Accelerator, IoT Division

Act 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 *2017 – 2017*

Data Scientist & Engineering Advisor/Consultant – Product Division

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

- Developed non-linear Kalman Filters to denoise RF sensory inputs (BLE, Radar) for localization tracking and machine intelligent detection algorithms for pedestrian access control 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 *2016 – 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 *2012 – 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 sector state-of-the-art technology and data-centric 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* *2011 – 2012*
- Broadcom, *Principal Engineer – Systems Engineering, Cellular Division* *2011 – 2011*
- Qualcomm, *Staff Engineer – Computing and Consumer Division* *2007 – 2010*
- TapRoot Systems, *Principal Engineer – Mobile Products & Services* *2003 – 2007*
- Panasonic Mobile Communications, *Senior Engineer – Mobile Platforms* *2000 – 2003*
- Verizon Wireless, *RF Engineer – RF Systems Performance* *1999 – 2000*

PROFESSIONAL AFFILIATIONS

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

PATENTS

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

EDUCATION AND CREDENTIALS

Education

- M.S. Data Science, Data ScienceTech Institute (Paris, France) – Course Credits Forward *2016*
- B.S. Electrical Engineering (EE), Lehigh University (Bethlehem, PA) – Degree Received *1999*

Certifications

- Product Manager, Product School *In Progress*
- Design Thinking, Rutgers Center for Innovation Education (New Brunswick, NJ) *2019*
- Big Data Strategy, Rutgers Center for Innovation Education (New Brunswick, NJ) *2019*
- Data Science Immersive, Galvanize (San Francisco, CA) *2016*

TECHNICAL SKILLS

Agile PM:	Jira, Pivotal Tracker, Basecamp, Aha, Notion, Bugzilla, Trello, Doors
Languages:	Python, Scala, Java, R, SQL, JS, D3, Node, HTML, CSS, Markdown, C, C++, ARM
Operating Systems (OS):	Linux (Ubuntu, CentOS, Fedora, Debian), MacOS, Windows
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, Spark NLP, 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 Stack, 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