***ARI KAMLANI***

*DATA SCIENTIST | PRINCIPAL ENGINEER*

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*San Francisco, CA*

*Data Scientist, Principal Engineer* skilled in delivering strategic large-scale and early-stage projects, with particular attention to alleviating user and technology pain points. Experienced in driving new strategic business initiatives, delivering R&D POC designs, and developing client/vendor engagements. Proficient in building end-to-end analytical machine learning pipelines, comprised of processing both structured and unstructured data.

**TECHNICAL SKILLS**

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| ***Enterprise/Tools***   * Apache Spark, Hadoop | ***Data Analysis/Frameworks***   * Postgres, MySQL, SQLite, MongoDB | ***Programming/Platforms***   * Python, Scala, R, SQL |
| * AWS EC2, EMR, S3 * SAS Enterprise Miner, Visual Analytics * IBM BigInsights, SPSS, Bluemix, Watson * Git, Perforce, ClearCase, SVN, PVCS * Pivotal Tracker, Doors, Bugzilla | * Jupyter, Zeppelin, RStudio, Rodeo * IPython, IntelliJ, Spyder, Eclipse * Sklearn, NLTK, GraphLab, OpenCV * TensorFlow, Keras, DL4J * D3.js, p5.js, Plotly | * C, C++, ARM, UML, OCL * 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**

Udacity Self-Driving Car (SDC) | Online | Nanodegree Program *Nov 2016 – Sep 2017*

Galvanize | San Francisco, CA | Data Science Immersive Bootcamp *Jun 2016 – Aug 2016*

Data ScienceTech Institute (DSTI) | Paris, France| Part-Time Data Scientist Program *Oct 2015 – May 2016*

General Assembly | San Francisco, CA | Part-Time Data Science Program *Oct 2014 – Dec 2014*

Lehigh University | Bethlehem, PA | B.S. Electrical Engineering (EE) *Aug 1995 – May 1999*

**PROJECTS**

**DeepLearning4J (DL4J) Workshop | Skymind**In collaboration with Skymind, prepare an enhanced DL4J Spark and Multi-GPU workshop **Self-Driving Cars | Udacity**

Autonomous driving projects per computer vision perception and sensor fusion environment detection and tracking, including the use of frameworks such as such as TensorFlow, Keras and OpenCV on GPUs

**Visitor Tracking Behavior Patterns | Cooper Hewitt Smithsonian Design Museum**

Developed an analytical pipeline via Apache Spark GraphX/GraphFrames and hierarchical clustering algorithms to provide the museum insights into visitor behavior tracking patterns and temporal exhibition events

**EXPERIENCE**

**Tyto | San Mateo, CA** *Mar 2017 – Present*

*Data Scientist & Engineering Advisor/Consultant – 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 optimization

**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 on 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 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 roadmap features
* Facilitated multi-site coordination per customer (RIM) 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*