

Faiz Ikramulla
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EXPERIENCE

Machine Learning Engineer: October 2019 to Present

Maryville University/NGA; St. Louis, MO (federally sponsored geospatial machine learning project)

- Developed scalable MVP for counter trafficking efforts (March 2020)
- Data research, exploratory data analysis, data wrangling + tidying/cleaning
- Algorithm experimentation, modeling, validation, iteration, optimization
- R, Python Geospatial: (rgeos, sf, maptools, raster, rgdal, geosphere, rworldmap)
- R, Python Machine Learning (ML): (keras, tensorflow, caret, numpy, scikitlearn, randomForest, pytorch, theano)
- Geospatial Tools - ArcGIS, QGIS, Google Earth Pro, Google Earth Engine, Neo4j, kepler

Senior Hardware Engineer: June 2017 to Present

Aclara Technologies; St. Louis, MO

- Technical Lead for RF hardware development and product integration for smart metering infrastructure solutions
- Antenna and RF front-end designer and developer, including new and sustaining engineering activities
- Use of electromagnetic/EM/RF CAD and PCB Tools: Agilent ADS, CST, Qucs, Allegro
- EMC/EMI/RF Desense: testing, root cause diagnosis, and resolution. FCC/UL: pre-test and certification test.
- Led cross-function team of electrical/mechanical/manufacturing functions: DFX & launch production

Product Development Consultant: March 2015 to December 2017

Independent; Chicago, IL

- GPS-Based Modules and Tracking Devices for Delivery Truck Fleet Efficiencies
- Drone Detection and Jamming Device based on Software Defined Radio
- RF Receiver Desensitization for Wireless 2G/3G/LTE Point-of-Sale Device
- Novel Wireless Charging Device based on GaN Technology
- Noise Reduction of "In-Suite" Device to achieve MRI Compatibility

Sr. RF Technology Development Engineer/Inventor: August 2011 to November 2014

Philips Electronics, Healthcare Division; Pewaukee, WI, Eindhoven, NL

- Technical Lead for RF transceiver module development and medical device integration.
- Architecting RF/analog/mixed signal system: responsible for establishing requirements and specifications.
- Designing/testing/optimizing hardware: verification and validation testing / documentation.
- Leading cross-functional teams: electrical, mechanical, systems, and manufacturing engineers .
- Driving product development to market release – engineers, suppliers, operations, marketing, applications, mgt.
- Managing: project planning, scheduling, budgeting, risk mitigating, goal meeting and/or exceeding.

RF/Electrical Design Engineer III: September 2008 to August 2011

Philips Electronics, Healthcare Division, Pewaukee, WI

- RF/Electrical design engineer of RF receiver coils for magnetic resonance imaging (MRI) systems.
- Developing MRI front-end receiver hardware: near-field phased array antennas, amplifiers, control circuitry, filter design, RF switches, VGA, ADC integration, Rx line-up trade-offs.
- Schematic capture and PCB layout (Protel/Altium),
- RF CAD simulating (SPICE, NEC, Matlab, EM/RF, Microwave Office), Electromechanical packaging
- Lab prototyping development and evaluation (VNA, Signal Generator, Power Meter, NF Meter, Oscope).
- DFX-ing: Design for Performance, Cost, Quality, Test, Manufacturability
- Certifying: UL, IEC, FDA

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EXPERIENCE (cont.)

Senior Staff RF Hardware Development Engineer: January 2005 to September 2008

Motorola; Mobile Devices Business; Libertyville, IL

- Technical Lead for RF/wireless circuit and sub-system development for multiband mobile device products.
- Responsible for technical specifications, component selection, schematic capture, and PCB layout (Mentor/Cadence) through to prototype validation, manufacturing ramp, and product introduction.
- Design for Performance, Quality, Cost, and High-Volume Production.
- Expertise: 3G/GSM/EDGE/WCDMA RF chipsets (Qualcomm and Freescale), power amplifiers, LNAs, filters/duplexers, transmitter and receiver modules, RF switches, antenna integration, BT, GPS, Wifi, NFC.
- Used RF CAD tools (Agilent ADS) extensively and oversaw PCB layout employing best practice for layout

Senior RF Hardware Design Engineer: January 2002 to January 2005

Motorola; Global Subscriber Product Design Center, Mobile Products Engineering Team; Plantation, FL

- Designed, analyzed, tested, and optimized RF circuits and systems for high power mobile radios
- VHF/UHF/700/800MHz transmitter & receiver amplifier (PA/LNA), filters, mixers, VCO, PLL, frequency synths
- Expert w/ RF test equipment: network analyzer, spectrum analyzer, signal analyzer, power meter, oscilloscope.
- Incorporated software simulation tools (Agilent ADS, SPICE) in analysis, design, layout, and optimization.

Adjunct Professor - Electronics Engineering Technology: October 2003 to January 2005

DeVry University; Miramar, FL

- Instructed electronics engineering courses and laboratories as part of Associate's Degree curriculum.

SOFTWARE/DATA SCIENCE

- **Languages:** Python, R, C++, Java, JavaScript, C, MATLAB, Fortran, Basic, Go, Julia,
- **Platforms:** MATLAB, TensorFlow, Keras, PyTorch, Caffe, SQL, AWS, Azure, GitHub, ArcGIS
- **Skills:** Computer Vision (OpenCV), Geospatial, Predictive Modeling, Machine Learning, Deep Learning

VOLUNTEER

- **Co-Organizer, meetup (st. louis machine learning & data science), St. Louis, MO (2019 – present)**
- **Board Member, UMMA Centers, Waukegan, IL (2006-2012)**
- **GED Instructor, UMMA Centers, Waukegan, IL (2005-2011)**

EDUCATION

- **Master of Science in Data Science, Maryville University, St. Louis, MO (December 2021)**
- **Master of Science in Electrical Engineering; w/ Honors, Georgia Tech, Atlanta, GA (December 2001)**
- **Master of Business Administration, Marquette University, Milwaukee, WI (May 2013)**
- **Master of Science in Data Science, Southern Methodist University, Dallas, TX (2018-2019)**
- **Bachelor of Science in Electrical Engineering; w/ Honors, Michigan State, E. Lansing, MI (August 2000)**