Athar Pasha, MSEE, PMP

+1 503 709-7885 | athar.n.pasha@gmail.com | Portland, OR

Summary

A high-tech professional with over 20 years of experience across multiple industries, my specialty is working with technical teams to solve large-scale, complex problems using Machine Learning. I am highly knowledgeable in a wide range of technical and business principles with an aim to help businesses incorporate curated data into their strategic planning and decision-making processes to achieve operational efficiencies. Proven track record of executing on multiple simultaneous project streams in environments that have a lot of uncertainty. Hands-on experience with:

- Pyton, R, VBA
- Machine Learning
- Statistics
- AWS, Azure, Google Colab
- Leading Program Teams
- Training and Mentoring
- Problem Solving
- NPI
- Strategic Planning
- Customer Engagement
- Change Management
- Supplier Management

Work Experience

NeuronTech LLC, Portland OR ***Sep 2019-Present***

Medical Robotics for Assisted Surgery *(Python, scikit-learn, pandas, NumPy, Keras*): Developed algorithms for based on objects detected in cavities. The module was part of software that interfaced with robot motion.

Insitu (A Boeing Company), Bingen, WA ***Feb 2009-Sep 2019***

Senior Technical Engineer Capture Analytics, Aug 2014-2019

Led a 10+ member team to develop and deploy salable Machine Learning algorithms across enterprise:

- **Segmentation for Predicting the Winning Price** *(Python, scikit-learn, pandas, NumPy, AWS*): Institutionalized novel Price-to-Win strategy (PTW) for competitive bids using k-means clustering, identified 3 clusters from 110 columns of data that included *Terrain, Engine Type, Launch Angle, Maritime,…Ship*. Eliminated "gut-feel" inconsistencies, reduced PTW calculation time from weeks to hours and increased win rates by 50%. This model was initially implemented with RNN to predict time series but the accuracy was very poor based on small database for historical wins/losses.
- **Predictive Maintenance/ Predicting UAV failure** *(Python, scikit-learn, pandas, NumPy, AWS, TensorFlow, RNN):* Using database that contains data for more than a million hours of flight telemetry on sensors such as *air-speed, throttle position, cylinder head temperature* for all UAVs ever flown, designed an RNN-based time sequenced predictor to predict failure by using 3 sensors as inputs using the operational history of the currently deployed UAV. 98% failures prevented.
- **Mathematical Modeling for Optimizing Sparing Strategy** *(Python, Pandas, Scikit-learn, Oracle Crystal Ball)*: Innovated UAV spare parts strategy by predicting spare part quantities for LPTA bids based on modeling failures as Poisson events. Using Monte Carlo and depreciation schedule of hardware, the model determined the optimal bid price taking into account realistic future failure rates. This reduced the number of spare parts compared to historically generated prices, thus allowing a lower bid price.
- **Statistical Modeling of Risks (***(Python, Pandas, Scikit-learn)***:** Created Risk & Opportunities Register using Monte Carlo analysis to predict total impact on $s and schedule.
- **Predictive Text Generation for Proposals (***Python, NLTK, LDA, pandas, scikit-learn, matplotlib ,beautiful soup)*: Using NLP, designed software for predictive machine-recommended text for multi-million-dollar company proposals. Data pipeline included web-scraping, data cleaning, grid-search and cross-validation Handled class imbalance by coming up with an optimal number of "topics." Using an innovative strategy that combines supervised and unsupervised learning for multi-class classification predicted text was populated for Proposal Response with 95% accuracy while reducing human involvement time from weeks to days.
- As a Technical Volume Lead, managed a winning $100m US Govt proposal. Used this experience for deep understanding of areas that machine learning could be leveraged for business processes and proposal development.

Senior Program Manager *Feb 2009 to Aug 2014*

Led a 2-year $10m effort to develop and integrate new propulsion system for UAV to improve first-time quality and TBO to lower cost. Down-selected an Australian manufacturer. the US. Increased first-time build rate by 300% by introducing zero defect in PMU manufacturing. Schedules met within 8% and costs within 10%.

- Responsible for gap analysis, life-cycle management, schedule, prototype development, subcontractor management, testing (flight, environmental, EMI and functional) and integration
- Developed framework for risk mitigation and ITAR compliance for analyzing RFIs for vendor selection to prepare business case for investment in new PMU.
- Managed FPS (Requirements), Charter, Scope, Project Planning documents and First Article Acceptance plans.
- Led 20+ international team and managed communication, schedules, cost/price/performance targets.
- Aligned with the PMO and functional organizations to implement process to develop work plans for change management work streams and related activities

Tektronix, Beaverton, Oregon ***2006- 2009***

Product Line Manager

- Lifecycle management of $13m product line for Wireless Field Testing. Responsible for product introduction, monitoring trends, forecasting, segment identification and demand generation.
- Managed launch of the H600 and the SA2600 for wireless testing; crafted positioning, value selling and launch strategy. Responsible for all collateral including application notes, videos and competitive analysis.

General Electric, Tualatin, Oregon ***2004- 2006***

Marketing Manager

- P&L management of a $20m product line that included Mobile Video Recorder, High Density Video Switches (HDS) and Intelligent Video platform.
- Responsible for engineering and marketing teams spanning a highly matrixed global organization.
- Set up design/manufacturing of HDS with a Canadian partner. Managed all legal, technical and logistical issues.
- Gathered Voice of Customer, implemented pricing, selected OEM partners. Maintained a steady growth of 25% for the switch market while simultaneously managing redesign of aging products.

VideoTele.com (Tektronix Company, later Motorola**),** Lake Oswego, OR ***1998-2004***

Marketing Manager

- P&L accountability, business development and product leadership for $8m Video Compression and Transmission product line for transmitting MPEG/IP/ATM. Formulated product strategy, developed commercialization plans, managed yearly operation plan and drove long- term strategic planning for NA and China business. Crafted white papers, case studies and app notes. Led cross-functional design teams and OEM partners to implement manufacturing, supply chain, marketing and pricing strategies.

Tektronix, Beaverton, Oregon ***1987-1998***

- Lead DSP Engineer, Architect Compression Engine for M2-T200/T300, VG-155
- Designed JPEG & MPEG hardware using FPGAs using Verilog, VHDL
- Architected Tektronix's first Digital Spectrum Analyzer Tek 3052/3054

EDUCATION

Data Science Certificate, Harvard Extension School 2018
MS, *Technology Management,* Portland State University
MS, *Electrical and Computer Engineering,* Washington State University
BS, *Honors Program, Electrical and Computer Engineering,* Washington State University

ADDITIONAL INFORMATION

US Patent 7,453,829, "Method and Apparatus for Conducting A Video Conference"
PMP Professional; **Six-sigma** Green Belt