Experienced engineer in various roles in the Engineering industry, not limited to Project management, Structural design, Tooling, Equipment & Manufacturing engineering with a strong passion for Data analysis, Visualization and Machine learning.

To develop both predictive and prescriptive analytical solutions for today’s challenges.

**DATA SCIENCE SKILLS**

**Data Munging/Preprocessing**

* Visualization using python Matpotlib and Seabon library
* Python’s Pandas and Numpy library
* Microsoft Power BI
* Feature Engineering/Selection
* Perform Exploratory Data analysis

**Data Querying**

* Querying with Transact SQL
* Introduction to SQL for data science
* Joining Data in PostgreSQL

**Machine Leaning Platforms**

* SparkML
* Microsoft Azure machine leaning Studio
* Python’ Scikit-learn library

**Big Data**

* Hadoop
* Spark

**Statistics**

* Nulls hypothesis
* Bayesian probability models
* Sensitivity analysis
* Multivariate data analysis
* Bivariate data analysis
* Time-series analysis

**Programing languages**

* Python
* SQL
* Pyspark

**Machine leaning**

* Supervised Machine learning using regression and Classification
* Unsupervised machine learning using clustering
* Regression (linear, lasso and Ridge)
* K-Nearest Neighbor (KNN)
* Support Vector Machines(SVM)
* Decision trees, Decision forest, Random Forest
* Logistic regression
* Neutral network
* Bagging methods
* Bias-Variance trade off
* Pipelines
* Recommenders
* Hyperparameter tuning and Regularization
* Text analysis using Tokenizer, StopWordRemoval and HashingTF
* Use of Cross Validation and Train, Test Split.

**COLLEGE EDUCATION**

Master’s in Data Science TTU Jun-2019 – Jun 2020

Master’s in Engineering Management UHCL Aug 2014 – Dec 2015

Bachelor’s in Aerospace Eng. / Minor in Mech. Eng. UTA Jun 2010 – May 2012

**CERTIFICATIONS**

Microsoft Professional Certificate in Data Science EDX Jan-2019

Project Manager Professional PMP® PMI Nov 2018

Cert. Six-Sigma Green Belt/Project Management UHCL Aug 2014 – Dec 2015

**NOTABLE PROJECTS**

* Use of machine learning in predicting the number of evictions in the US at the county level.
* Design of the first bunk moving line Assembly tool at Boeing IRCSC.
* Design of all the required tools and work stations for the production of the Embraer Phenom 300 and E2 seats for the new Embraer facility at Titusville Fl.
* Design of the Pratt and Whitney XT900 Power Turbine Engine.
* Design of SERFE flight payload for the International Space Station at NASA/JSC.

**CAREER SUMMARY**

* Management of engineering projects from conceptual design phase to final design phase performing various activities not limited to project scope, requirement analysis, WBS, project scheduling, cost analysis and supplier selection.
* Design engineering using CAD packages like CATIA V5, Creo 3, Autodesk Inventor, NX, and Solid works for 3D modeling and 2D drawing creation, from preliminary to final design stage.
* Design analysis of various components and assemblies using hand calculation
* Specialized in the design of various aircraft components and various engineering parts such as engines, fans, rotors, airframe, pumps, shell and tube heat exchangers, compressors, die cavities, hydraulic and pneumatic components, valves, gears and various tools.
* Perform Machine and Process FMEA on various designs and manufacturing processes.
* Engineering Data Management using PLM packages like ENOVIA V6, Wind-chill, and Vault
* Read and interpret engineering blueprints, schematics, assembly prints and part drawing with excellent familiarity with GD&T ASME Y14.5-2009, and AWS D1.1 standards of manufacturing

**PROFESSIONAL EXPERIENCE**

***Boeing, Everett WA (Contract) Feb 2018 – Present***

***Project Management***

* Project management of multi-million dollar service contracts with external suppliers.
* Reviewing of formal supplier delivery documents to make sure they meet original service contract requirements.
* Developing business case analyses to make buy or make decisions.
* Oversee and provide training for both engineers and technicians.
* Development of process maps not limited to process workflow diagram and business flow diagram.
* Facilitate brainstorming event to help gather requirements from project stakeholders

***Tooling and Equipment Engineer III***

* Develop Machine and Process FMEA for various engineering equipment.
* Create preventative maintenance for various tools and equipment
* Design and modification of various tooling required for production.
* Use of GD&T ASME Y14.5-2009 in making of 2D drawings for designed components.
* Create and design new job aids to assist in the production of the 777X spar assembly.
* Design and modification ME tooling targets for ERS Evaluations.

***Jacobs / NASA JSC, Houston TX (contract) Aug 2017– Jan 2018***

***Design Engineer***

* Design of flight payloads and create drawings for NASA/JSC using CREO 3.0.
* Design of the SWME Express Rack Flight Experiment (SERFE) to demonstrate the capability of an advanced Extravehicular Activity(EVA) technology for thermal control known as the Spacesuit

Water Membrane Evaporator (SWME) used in the International Space Station (ISS).

* Design of 3D and 2D components using Creo 3 and Windchill.
* Interpret the flight test schematics of the experiment in order to design appropriate components.
* Making of drawings according to NASA JSC system manual JPR 8500.

***Parametric Solutions (Pratt and Whitney Contract), Jupiter FL May 2017– Aug 2017***

***Mechanical Design Engineer***

* Design of the Pratt and Whitney XT900 Power Turbine Engine.
* Design of the static and rotary components of gas turbine engines like the Power turbine case, stator vanes, blow out air seals, low pressure turbine case, high pressure turbine case, turbine exhaust case, rotors and blades.
* Design of primary and secondary snap fits for rotors, blades, PT case, TEC, MTF of the turbine engine.
* Design of assembly and disassembly features like the Jack screw feature on the Power Turbine case.

***Embraer Aero Seating Technologies (contract), Irwindale CA Apr 2016 – Mar 2017***

***Tool Design Engineer***

* Design of all the tooling, equipment, machines and workstations required for the manufacture of the Embraer Phenom 300 and E2 seat configurations.
* Definition and structural design of the Phenom 300 and E2 seat configurations.
* Design of new tools and equipment used for the production of seats for the interior of airplanes using Solidworks CATIA V5.
* Model Based design of tools showing proper part design, annotations and tolerances in 3D CAD environment using Solidworks and CATIA V5.
* Carry out tolerance stack up analysis of assemblies.

***Boeing Company, Helena MT (contract) Nov 2015 – Apr 2016***

***Tooling Engineer III***

* Maintenance and modification of existing tools.
* Evaluates requirements to develop tooling concepts.
* Design, modification and release of engineering tools used in the production of Boeing 777X parts using CATIA V5 and ENOVIA LCA.
* Design of the tools used for shot peening of the 777X side body chord and upper splice plate.
* Assists in developing tool engineering processes and technologies.
* MBD design of tools showing proper annotations and tolerances.

***Boeing Company, IRCSC, Charleston SC, (contract) Oct 2013 – Oct 2015***

***Tooling Engineer***

* Design, release and modification of engineering tools, equipment, and machines used in the production of Boeing 787 parts using CATIA V5 and ENOVIA LCA. I was also in charge of creating and modifying existing 2D drawings used in tool manufacturing.
* Design, test, and install tooling and PLC driven, automated equipment for manufacturing and packaging which Include creating models and fabrication packages using CATIA V5 to make prototype and production tooling for fabrication by internal shop.
* Design of tools to be used alongside the closet and bunk moving line.
* Use of GD&T ASME Y114.5-2009 and AWS D1.1 standards of manufacturing in creating engineering drawing.

***Bell Helicopter (A Textron Company), Hurst TX (contract) Nov 2012 – Oct 2013***

***Design Engineer***

* Follow clients modeling and drafting standards for maximum output. Responsible for executing conversion of Bell Helicopters legacy Bill of Material (BOM) parts from legacy BEAMS, NAVBOM applications to ENOVIA V6.
* Using Enovia V6 to convert Bell Helicopter old drawing database in CATIA V4 and V5 from R3 Release to R4 Release in Enovia V6. Doing this required vivid Knowledge of Materials and manufacturing processes with ITAR certified and Export Control Knowledge as a requirement.
* Design of components and assemblies using either CATIA V5 or NX 7.5.
* Helped in the Definition of Processes, Productivities and Quality (PPQs) for the offshore CAD Design team.
* Use of ENOVIA to push Engineering Bill of Materials (EBOM) to Planning Bill of Materials (PLBOM).

***Parker Hannifin, Fort Worth, TX Apr 2012 – Nov 2012***

***Manufacturing Engineer***

* Design and creation of engineering components and assemblies using various 3D CAD packages like CATIA V6 Autodesk Inventor and AutoCAD.
* Use of ASME standards in the manufacturing/design process of engineering parts and tools.
* Design of tools using ASME standards of tool dimensioning and tolerance.
* Creation of assemblies using constraints like mating, aligning etc.
* Drawing, Reviewing and interpreting of engineering drawings and tooling prints.
* Design of plant layouts using AutoCAD mechanical to show the location and positioning of machines, tools, furniture and the required drop down of electrical and vacuum lines on the production floor.

***UTA Civil Engineering Laboratory, TX Jun 2011 – Apr 2012***

***Civil Engineering Lab Assistant***

* Assisted the lab engineer in performing various structural and stress analysis of concrete blocks.
* Daily maintenance of all lab machines.
* Testing of the various structures for failure alongside with the Civil engineering lab engineer.
* Testing of blocks under compressive loading.
* Design of various concrete to be tested under compressive loading