

Piyush Tandon

+1 (253)392-9925 | pitandon@uw.edu | [linkedin.com/in/pitandon](https://www.linkedin.com/in/pitandon) | github.com/Mrtandon97 | [Portfolio](#)

Summary:

Ambitious engineering graduate with a strong background in data analytics, project management, and operations. Experience in leading and managing projects in manufacturing environments and automotive industry. Skilled in analyzing large datasets and implementing predictive models. Proven ability to lead cross-functional teams and manage the full data science project lifecycle, from data acquisition and model development to deployment and optimization. Open to relocation.

Skills:

- **Programming Languages:** Python, R, SQL, C++, HTML, CSS, Java
- **Machine Learning & AI:** TensorFlow, Keras, Scikit-learn, PyTorch, LLMs, Random Forest, SVM, NLP
- **Data Science:** Data Preprocessing, Feature Engineering, EDA, Model Deployment, Predictive Analytics
- **Data Visualization:** Tableau, Power BI, Matplotlib, Seaborn, Minitab
- **Cloud & Big Data:** AWS (SageMaker, S3), GCP (BigQuery), Azure
- **Design and Prototyping:** SolidWorks, CREO, CATIA, CFD, Rapid Prototyping, Machining composites, 3D Printing, CNC, MPI, P&IDs, GD&T, ASME Y14.5 standards and ISO9001
- **Manufacturing and Quality Control tools:** Proficient in process capability management, defect analysis, PLM software like Active workspace client, experienced with Six Sigma methodologies, 5S, Lean Manufacturing, 8D, APQP, PPAP, DFMEA
- **Production tools:** ERP, QMS, MRP, DFM, Kaizen.
- **Project Management:** Agile, SCRUM, Stakeholder Management, Risk Mitigation, Resource Planning.
- **Soft skills:** Experienced in working with cross-functional teams, ensuring alignment, and facilitating efficient project execution. Strong communicator capable of articulating technical and non-technical concepts to diverse audiences with strong presentation skills.
- **International Experience:** Summer School Abroad at **University of Oxford**, Leadership Exchange program in **Istanbul, Turkey**.

Work Experience:

Product Engineering Co-op

Jan 2024 – Aug 2024

Bendix Commercial Vehicle Systems – Kalamazoo, MI

- Engineered process improvements and optimized designs for heavy duty vehicle brake components using CAD and DFMEA.
- Utilized predictive modeling techniques to inform material selection and design approaches, improving product reliability.
- Participated in Design Review Council, Design Verification Plan and documenting key design changes.
- Spearheaded a project to build predictive models using Random Forest and Logistic Regression, analyzing truck system failure patterns with 92% accuracy.
- Developed a ML model for Legacy bracket cross reference with New gen brackets which resulted in reducing 90% of manual effort.
- Assisted in the creation of dashboards using Tableau, providing the leadership team with real-time insights into brake component reliability.

Engineering Intern

Jul 2023 – Dec 2023

UW Facilities-Engineering Services – Seattle, WA

- Analyzed HVAC systems, focused on heat recovery units and suggested improvements leading to reduced carbon footprint.
- Collaborated effectively with engineers, facility managers, and external contractors to ensure project success.
- Identified cost saving methods to save 3.8 million dollars/year and attain 45% reduction in carbon footprint.
- Managed cross-functional teams to develop and deploy machine learning models for predictive maintenance in HVAC systems, reducing downtime by 15%.
- Led project planning, scope definition, and stakeholder communication for data-driven projects in the HVAC domain.

Senior Analyst (Software and data)

Jul 2021 – Sep 2022

Capgemini Technology Services – Pune, India

- Drove continuous improvement initiatives by automating processes using Excel Macro, Oracle BI, improving efficiency.
- Led the data analysis for a product launch at Barclays Investment, utilizing 8D and Continuous Improvement (CI) methodologies to address process inefficiencies.
- Collaborated with cross-functional teams to collect and analyze data, improving system processes and reducing errors by 25%.
- Developed Tableau dashboards for senior management to monitor product performance, enabling data-driven decisions.
- Conducted A/B testing and statistical analysis to optimize product launch strategies and improve customer satisfaction.
- Assisted in automating data extraction pipelines, resulting in a 30% increase in data processing efficiency.

International Internship program

Feb 2020 – Aug 2020

Mercedes-Benz US International – Tuscaloosa, AL

- Led data-driven optimizations of assembly line layouts for GLE and GLS models, reducing takt time, increasing production by 2%.
- Utilized Python and SQL to analyze production data, identifying key bottlenecks and proposing solutions that improved workflow.
- Developed predictive models using historical production data to forecast equipment downtime, reducing maintenance by 15%.
- Conducted time series analysis of assembly line performance metrics to identify patterns and inform process improvements.
- Collaborated with cross-functional teams to design dashboards in Power BI, enabling real-time monitoring of key performance indicators (KPIs) such as takt time, cycle time, and production efficiency.

Projects:

- Tiny ML ("Good Help")

Jun 2023 – Present

 - Led the design and development of a voice-activated panic detection system using ML for healthcare applications, managing a team of developers and data scientists.
 - Managed the project's budget, resources, and timelines, ensuring a successful deployment within the stipulated deadline.
 - Coordinated the integration of AI model into mobile apps and ensured real-time notification capabilities using Firebase.
 - Created the CAD model for a wearable watch that integrates the voice-activated panic detection system, focusing on ergonomic design and practical functionality.
 - Collaborated with the team to ensure that the CAD design aligned with the hardware and software requirements of the project facilitating seamless integration of the technology.

- NASA JPL (Grad Capstone)

Jan 2023 – Jun 2023

 - Led the team as **project manager** and assisted a team of CS professionals in developing ML Model for Multi Static Lunar GPR.
 - Led the data acquisition phase by collaborating with engineers and scientists to gather large-scale sensor data from various lunar ground-penetrating radar (GPR) systems. This included extracting structured and unstructured data from hardware logs, telemetry data, and operational reports.
 - Implemented data preprocessing pipelines in Python, using libraries like Pandas and NumPy to clean, normalize, and transform raw sensor data, ensuring it was formatted correctly for model training.
 - Integrated data from multiple sources, including satellite telemetry, radar scans, and maintenance logs, to create a comprehensive dataset for machine learning models.
 - Used data augmentation techniques to expand the dataset by generating synthetic samples through techniques such as GANs (Generative Adversarial Networks), which helped address the issue of limited real-world data.
 - Developed custom scripts to automate the data collection process from remote databases and cloud storage, ensuring continuous data ingestion for real-time model updates.
 - Analyzed the quality of data using EDA (Exploratory Data Analysis) and performed feature selection to identify the most relevant parameters that affected equipment failures.
 - Collaborated with domain experts to refine data labeling processes, ensuring accurate tagging of anomalies and system malfunctions for supervised learning tasks.

- Grainer (Undergrad Capstone)

Sep 2020 – May 2021

 - Led the team as **project manager**. [Grainer website](#)
 - Collaborated with faculty advisors and stakeholders to ensure the project met academic and sponsor expectations.
 - Defined project scope, deliverables, and objectives, providing structure and direction to the team.
 - Identified potential risks and implemented mitigation strategies to keep the project on track and avoid delays.
 - Managed resource allocation, coordinating team efforts to ensure timely completion of tasks.
 - Tracked project timelines and milestones, adjusting schedules as needed to ensure on-time delivery.
 - Maintained the project within budgetary constraints set by the academic program, ensuring efficient use of resources.
 - Conducted quality reviews, ensuring that final deliverables met academic standards and project goals.

Education:

- Masters of Science in Mechanical Engineering with Data Science Specialization GPA 3.72

Sep 2022 – Aug 2024

University of Washington, Seattle, WA.
- Bachelor of Engineering in Mechanical Engineering (CS Minor) GPA 8.13/10

Jul 2017 – Jul 2021

Thapar Institute of Engineering & Technology, Thapar University, India.

Leadership Activities:

- Leadership Exchange Program Participant – AIESEC, Turkey**
Collaborated with an NGO to promote cultural exchange and worked towards UNESCO's Sustainable Development Goals in education. Led educational workshops and facilitated cross-cultural understanding among participants.
- Team Lead – Capgemini Technology Services**
Supervised a team of analysts, driving process improvements and delivering key data solutions for Barclays Investment using 8D and Continuous Improvement methodologies.
- General Secretary – Global Internship Council, Thapar University**
Oversaw the council's activities, coordinated internships for students, and facilitated global opportunities.
- Head of Media Team – Thapar University**
Led a team responsible for managing the university's media communications, digital campaigns, and public relations.
- Social Media Chair – Mechanical Engineering Graduate Association, University of Washington**
Managed social media platforms for the association, promoting events and initiatives, and increasing student engagement within the graduate community.

Certifications:

- Certified Associate in Project Management (CAPM) – PMI

Languages:

English(Proficient), French(Basic), German(Basic)