

# VIPUL V SURESH

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## WORK EXPERIENCE

**Northeastern University | Graduate Teaching Assistant | Boston – USA** **Sep 2021 – Dec 2021**

- Mentored 29 Students with coursework, assignments, and project execution for IE7615 Neural Networks & Deep Learning

**Mata Inventive | AI Product Development Engineer co-op | San Diego – USA (Remote)** **Feb 2021 - Aug 2021**

- Conducted user research to identify manufacturing inefficiencies, developed Industry 4.0 strategies to improve operational KPIs
- Designed architecture to ingest data from shopfloor assets(PLC, HMI, SCADA,..) to cloud platform to facilitate vertical integration
- Developed edge DAQ to stream process-level data for real time analytics, monitored quality & performance KPIs on PowerBI
- Created user-centric dashboards on PowerBI across multiple manufacturing processes and drove customer acquisition by 65%
- Designed solutions for MES, ERP integration using APIs and connectors to support historic data ingestion, warehousing, and analysis
- Developed ML models trained on historic & simulated process data, predicted throughput of Injection molding up to 86% accuracy

**Amazon | Senior Investigations Specialist (Level 4) | Bangalore – India** **Oct 2018 - Jun 2019**

- Served as SME on data annotation workflow design aimed at manual defect mitigation and improved false positive rate by 12%
- Executed reactive Quality Assurance audits of incorrect manual annotations leading to an improvement in quality KPIs by 3%
- Oversaw resource allocation between cross-functional workflows with varied SLAs(2 to 12Hrs) to maintain on-time order approval

**Amazon | Transaction Risk Investigator (Level 3) | Bangalore – India** **Dec 2016 - Sep 2018**

- Served as SME on SOP amendment, QA, & KPI improvement drives with a reduction in process level KPI of 250 basis points
- Analyzed over 70k buyer accounts to identify payment fraud using pattern analysis resulting in overall savings of \$300,000
- Executed root cause analysis deep dives and reported Fraud AI system's false positives worth \$60,000 to the Risk Mining Team

**Schneider Electric | Process Improvement Intern | Bangalore – India** **Nov 2014 – Mar 2015**

- Diagnosed material flow bottlenecks, proposed changes to the Value Stream Map resulting in increased daily output by 4%
- Conducted work-study & ergonomics Gemba runs to advocate scalable changes with a projected increase in Takt time by 17%

## LEADERSHIP EXPERIENCE

**Co-founder & Vice-President | Lean Endeavors club, Northeastern University** **Apr 2020 – Nov 2021**

Organized six Lean workshops and webinars from eminent industry leaders with 110+ student members from NEU

**President & Student Coordinator | Student Council, NIE** **May 2015 - May 2016**

Led a team of 31 leaders across 14 committees to organize a three-day techno-cultural event with a footfall of 8000+ attendees

## ACADEMIC PROJECTS

**[Neural Network & Deep Learning: Thermal Image Semantic Segmentation](#)** **Sep 2020 – Dec 2020**

Achieved a binary cross-entropy loss of 0.118 against a benchmark of 0.0172, for semantic segmentation of IR images collected from the university's ADAS dataset trained on the UNet algorithm using Jupyter Notebook

**[Database Management for Analytics: MedsDeliver Database](#)** **Sep 2021 – Dec 2021**

Implementation of SQL and NoSQL databases with connections to front-end analytical applications such as Python, R, and Tableau

**[Digital Product Development: OneSchool App](#)** **Sep 2020 – Dec 2020**

Led team of four to develop a prototype for a centralized educational platform with a potential market worth \$40M, creating personas for three user segments, drafting PRD and MRD documents, and UI/UX mockups using Balsamiq

**[Data Mining: Lit Model](#)** **Sep 2019 – Dec 2019**

Achieved 77.5% accuracy in the binary classification of fire incidents using Logistic regression trained on the Boston fire dataset

**[Project Management: The Monday](#)** **Jan 2020 – April 2020**

Drafted project organization and implementation plan (IDEF0 Model, WBS, Gantt chart, PERT, RACI, and stakeholder matrix) for an AI/ML backed smart home assistant product development at a target budget of \$2.0 Million

## SKILLS

- **Programming:** Python, R, Bash, Node-Red, .NET, MySQL, Postgres, MongoDB, Snowflake, REST APIs, HDFS, Spark, Airflow
- **Tools:** Tableau, Grafana, MS office suite (Excel, Project..), Azure, VS Code, JIRA, SolidWorks, Catia, Balsamiq, Lucidchart
- **Frameworks:** IIoT, Agile, Kanban, Six Sigma, Kaizen, MapReduce, OPC-UA, MQTT, MTConnect, Docker

## EDUCATION

**Master of Science, Industrial Engineering**, Northeastern University, Boston, USA **Sep 2019 - Dec 2021**

Courses: Product/Project Management, Digital Product Development, Data Mining, Database Management

**GPA: 3.71/4**

**Bachelor of Engineering, Industrial & Production Engineering**, NIE, Mysuru, India **Sep 2012 - May 2016**

Extra-curricular: Member of SAE Baja, Captain of Swim and Archery Team

**GPA: 8.67/10**