Suraj Kunthu

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Work Experience

Software Engineer, Capital One, Richmond, VA   August 2023 – Present
- Backend Engineer in the Customer Core Platform (Feb 2025 - current)
- Data Engineer in the Marketing & Measurements Data Platform (Feb 2024 - Feb 2025)

Production Engineer, DuPont, Hopewell, VA   September 2021 – July 2023
- Promoted to asset leader responsible for a $8MM Mylar®/Melinex® stenter line generating 1.5MM lbs/month of boPET film
- Championing sitewide adoption of industry 4.0 initiatives and driving continuous improvement work in all aspects including production output, product quality, data analytics, and manufacturing efficiency
- *ETL Data Pipeline Project*
  - Increased data-to-action time 64% by establishing an ETL data pipeline to extract raw production data with Python from Excel and SAP ERP
  - Cleaned data with Python and standardized database schema sitewide; Loaded tables into a PostgreSQL server
  - Connected database server to PowerBI to generate multiple interactive dashboards used in asset performance reviews
- *Production Predictive Forecast Model*
  - Developed a Python script to retrieve product specifications and parse site's customer PHP database based on material order number
  - Calculated product timing forecast predictions with current process conditions and historic material efficiencies
  - Posted timing predictions on operation team's daily production schedule
  - Soft savings include increased awareness of product timing and quality level specifications
- *Lean Six Sigma Green Belt Project*
  - Led a team of 28 to reduce barium film internal failure rate by 32% -- total hard savings of ~$48k/year
  - Soft savings: overall process stability improved 14%, standard deviation improved 22%, and variance improved 40%
  - Leveraged Minitab to perform six sigma analysis including Gage R&R, Capability Analysis, t-test, ANOVA, and regression

Quality Engineer, DuPont, Hopewell, VA   June 2020 – August 2021
- Streamlined internal quality documents, improved document control systems, and supported site ISO 9001:2015 and BRC/GMP compliance audits
- Utilized SAP and SQL to extract raw quality performance data; Transformed data into business intelligence reports that track quality KPIs for the senior leadership team
- *Quality Text Analytics Classifier*
  - Replaced legacy Excel VBA macros and developed a Python script to classify internal rejects based on fault code and reject description
  - Calculated internal reject loss based on standard costs-per-pound information provided by finance department
  - Improved classification model by 85.2%, delivered categorized data to all stakeholders

Education

University of Virginia, School of Data Science   Charlottesville, VA
Master of Science in Data Science   May 2024

Virginia Commonwealth University, College of Engineering   Richmond, VA
Bachelor of Science in Mechanical Engineering, *minors in Mathematics, Physics, and Statistics*   May 2020

Involvement

- Instructor at Capital One Coders   Feb 2024 – *Present*
  - Led classroom of 15 middle-school aged students weekly through fundamentals of programming building mobile apps
  - Managed curriculum for 8 software engineering mentors to guide students through Android app development
- Tutor at Capital One Developer Academy   Feb 2024 – *Present*
  - Aided full-stack development bootcamp associates with varying topics monthly
- Admissions Ambassador at UVA School of Data Science   August 2022 – May 2024

Relevant Certifications

- AWS Certified Solutions Architect Associate, *Amazon*   July 2024
- Certified Secure Software Engineer, *Capital One*   October 2023
- Certified Lean Six Sigma Green Belt, *DuPont*   August 2022

Skills

- (*proficient*): Python, PySpark, HTML/CSS, JavaScript, SQL, git, bash
- (*familiar*): React, Java, C/C++, R