Udit Ennam

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Education

Rutgers University — **New Brunswick, NJ, USA**
Master of Science, Computer Science, CGPA: 3.42/4.0 — Sep 2017 - May 2019

Relevant Coursework: *Machine Learning, Databases, Computers in Biomedicine, Artificial Intelligence, Math for Data Science, Deep Learning, Data Mining, Data Wrangling, Data Structures & Algorithms, Probability & Statistics, Visualization, Computer Architecture.*

Technical Skills

- **Languages:** Python, SQL, Java, JavaScript **Operating Systems:** Windows, Linux, Mac
- **AWS:** S3, EC2, RDS, DynamoDB, Redshift, CloudFormation, Lambda, ElastiCache, CloudWatch, Glue, Athena, SNS, SQS, SageMaker
- **Full-Stack:** AngularJS, HTML, CSS, Bootstrap, Flask, SQLAlchemy, Git, PyTest, Postman API, Coverage, Google Analytics
- **Machine Learning/Other Tools:** Airflow, Terraform, Snowflake, Docker, Bitbucket, Jira, Numpy, Pandas, Matplotlib, Seaborn, Plotly, D3.js, Scikit-learn, PostgresQL, MySQL, BeautifulSoup, Scrapy, Kubernetes, Apache Kafka, PyCharm IDE, Jupyter IDE, IntelliJ IDE

Work Experience

- **Vanguard** — **Charlotte, NC**
  Senior Software Developer — Jan 2024 - Present
  Tools/Technologies used: Python, PyTest, Pandas, AWS - S3, Lambda, RDS, DynamoDB, SQS, EventBridge, Git, PostgreSQL
  - Designed a scalable distributed data classification system to tag S3 buckets, prefixes, and objects based on PII detection, using EventBridge, SQS, ECS clusters, AWS resource tags, IAM policies.
  - Built a python application to create PII data based on user-defined input json file and then upload them to multiple prefixes in an S3 bucket. This application was used to generate about 1.5 million objects for testing prefix and object discovery, classification and tagging prototype.
  - Created new regexes and enhanced existing classifiers in BigId for UK PI scanning work. Collaborated with the UK and BigId teams to understand the nuances and the data values.
  - Performed daily activities like checking for missing s3 buckets from the scanning workflow, creating IAM support tickets if there are issues with team-owned data sources; Built a consolidated autoscan report to capture s3 data sources, their creation dates, and scan status updates from inventory report and log files.

- **London Stock Exchange Group** — **Fort Mill, SC**
  Lead Python Developer — Jun 2023 - Dec 2023
  Tools/Technologies used: Python, PyTest, Flask, AWS - S3, Lambda, SAM, Git, PostgreSQL
  - Built an automated exclusion system and exposed a REST API to process and exclude entities from index funds if their revenue is generated from fraudulent categories, and scheduled a lambda function to run on a weekly or monthly basis.

- **T-Mobile** — **Remote, USA**
  Senior Data Engineer — Jul 2022 - Jun 2023
  Tools/Technologies used: Python, AWS, Git, SQL Server, Snowflake, Airflow, Docker
  - Migrated on-premise SQL Server to AWS RDS with multi-AZ deployment, automated backups, and performance tuning for improved transactional processing and high availability.
  - Upgraded Airflow to version 2.0, implementing RBAC, KubernetesExecutor, and AWS Secrets Manager, enhancing scalability, security, and DAG execution efficiency.

- **DraftKings** — **Remote, USA**
  Data Engineer — Sep 2021 - May 2022
  Tools/Technologies used: Python, Airflow, Terraform, Snowflake, Docker, AWS, Jira, Bitbucket, Git
  - Built the foundational code base from the ground up in Python and Snowflake to create an in-house data validation tool between upstream and downstream data sources.
  - Added new features and options to DAGs and services using Airflow 2.0 to improve monitoring and encourage a cleaner code base.
  - Extensively worked with Terraform and Airflow to create S3 buckets and the required computing resources to populate Snowflake tables with real-time third-party gaming data.

- **Amazon.com Inc.** — **Seattle, WA, USA**
  Software Development Engineer — Aug 2019 - Apr 2021
  Tools/Technologies used: Java, AngularJS, S3, DynamoDB, RDS
  - Developed full-stack internal tools to reduce the existing manual workload and take 95% less time to launch changes to production.

- Impacted about 2.3 million product titles across the Amazon catalog by resolving high severity configuration issue.
- Collaborated with cross-functional teams to build a scoring system for product titles required for precision measurement of the in-house tagging system.
- Tracked service deployment times and migrated pipelines to Full CD without the need for manual approval workflows, in turn reducing about 75% of the overall deployment time to production.
- Actively worked on operational duties, performed code reviews and testing, created design/SOP documentations, participated in mentoring.

- **School of Arts and Sciences, Rutgers University** **New Brunswick, NJ, USA**
  Part-time Lecturer/Teaching Assistant Jan 2018 - May 2019
  Tools/Technologies used: Python(Jupyter Notebook), HTML, CSS, JavaScript, Scratch, GSuite, Excel
  - Taught undergraduate CS courses: CS439 (Introduction to Data Science), CS110 (Introduction to Computers and their Applications), CS170 (Computer Applications for Business) which also included conducting and grading quizzes, exams, and assignments.

- **Wireless Information Network Laboratory, Rutgers University** **New Brunswick, NJ, USA**
  Data Science Research Intern, Project was in collaboration with Cornell University and NIH May 2018 - Aug 2018
  Tools/Technologies used: Python, SciPy, Google Colab, D3.js
  - Integrated data sources to obtain over 100GB of data to work on the calibration of ammonia sensors and reduced the previously existing model error by 2.14% through Pearson's and Spearman's coefficient tests and drift prediction using random forests model.

- **HopinTown** **Mumbai, India**
  Data Analyst Nov 2014 - Jun 2017
  Tools/Technologies used: Python, MySQL, Google Analytics, Tableau
  - Boosted the customer acquisition rate by 30% through finding key performance indicators via Facebook and Twitter social media analytics to tailor the offers and services provided to the customers.
  - Built customizable dashboards for reporting, prototyped about 10 new features and improved customer sales by 42%.

Key Project

- **Revenue Predictor (Python, Plotly, Scikit-learn, Flask)** **Received a gold medal badge at Rutgers**
  Deployed a machine learning model which combines Logistic Regression and Stochastic Gradient Descent Regressor trained on customer data with 98% null entries to predict the revenue generated by a customer.