TUSHAR KANT SAMANTARAY

812-369-0381 | tushar.k.samantaray@gmail.com | LinkedIn | GitHub | Bloomington, Indiana, 47408

EDUCATION

Indiana University-Bloomington — **Bloomington, IN, USA**
Master of Science in Data Science, ***GPA*: 3.6/4** — Graduating: May 2022
Coursework: Advanced Database Concepts, Algorithms, Artificial Intelligence, Big Data Management, Exploratory Data Analysis, Intelligent Systems, Machine Learning, Statistics, Natural Language Processing

C.V. Raman College of Engineering (Affiliated to BPUT) — **Bhubaneshwar, India**
Bachelor of Technology in Computer Science and Engineering, **GPA: 8.43/10.0** — Aug 2013 – May 2017

SKILLS

Programming skills: C#, Python, R, SQL, PL/SQL, Java, TypeScript, PostgreSQL, MySQL, MongoDB
Web development: HTML5, CSS3, Bootstrap, JavaScript, jQuery, Angular2, Ajax, Web Services, Azure DevOps
Tools and OS: Tableau, GitHub, TortoiseSVN, Postman, Soap UI, Microsoft Office, Windows, Ubuntu
Data Visualization and Analytics: Seaborn, Matplotlib, Jupyter, QGIS, Altair, Ggplot2, Plotly
Data Science and Machine Learning: Pandas, NumPy, Scikit-learn, PyTorch, Keras, TensorFlow, Apache Spark, Big Data, Neural networks, NLP, ML (Regression, Classification, Clustering)

PROFESSIONAL EXPERIENCE

Research Assistant – Data Analyst, Indiana University, O'Neill School — **May 2021 – Present**

- **Technology Stack**: Python3, R, Tableau, QGIS.
- Implementing a pipeline to scrape energy disconnection data from gas and electric utility organizations across the United States to create an interactive dashboard application using Tableau to display past energy disconnection data.
- Creating python scripts for data scraping, extraction, and cleaning were among the tasks. Using QGIS to create shapefiles for the utilities' operational territories to create scripts to combine disconnection data to generate spatial data files.
- Data management and documentation for the dashboard application.
- Recruitment of additional analysts to the project.

Associate Instructor, Indiana University, Luddy School — **Aug 2021 – Dec 2021**

- Teaching assistant for CSCI-B 561 Advanced Database Concepts course offered by Computer Science department

Senior Software Developer, Wipro Technologies (Client: HP Inc.), Bangalore, India — **Dec 2019 – May 2020**
Software Developer, Wipro Technologies (Client: HP Inc.), Bangalore, India — **Oct 2017 – Nov 2019**

- Full-stack web application developer in .NET technology in a development team of 8 members.
- **Technology Stack**: .NET, C#, MVC, WCF, ASP, REST and SOAP Web Services, JavaScript, jQuery, Ajax, IIS, Amazon Workspace.
- Responsible for enhancement and maintenance of multiple client applications with tasks involving implementation of new features, bug fixes, writing unit test cases, manual dev-env testing, and technical documentation.
- Automated feature to send reminder emails to customers with pending cart items, where backend SQL script would fetch details of the incomplete cart and trigger a web service that would create dynamic customized emails based on the cart items and user profile with a button that would allow the user to resume from where they left.
- Integrated client's generic payment system API, which would fetch payment details from the storefront application and call payment service to validate the payment to add OTP functionality with increased security.
- Implemented product warranty registration page for customers reducing the load on on-call service agents.
- Mentored peers to understand the applications and workflow.

ACADEMIC PROJECTS

Object-Detection using FAIR's Detectron2 (Github Link) — **Dec 2021**
Trained an object detection model using transfer learning to detect 5 different classes of vehicles from images.

Implications of demographics on income (Github Link) — **Dec 2021**
An exploratory data analysis and statistical modeling project on US labor statistics data between the years 2015 to 2020 was collected by CPS.

Recurrent Neural Network to predict next values of the mixed sine wave signal (GitHub Link) — **Mar 2021**
Implemented an RNN network from scratch including training using gradient descent with backpropagation so the network could predict the next value of the signal. A mix of sine waves (e.g., 2Hz + 3Hz) that is 100 samples long was used for training.

Estimating twitter's tweet location based on the tweet's content (GitHub Link) — **Dec 2020**
Using Python3, built a model that could predict the location of a tweet based on its content using a Naive Bayes classifier and a Decision Tree classifier from scratch. After removing the punctuations and stop words, the corpus was tokenized using a bag of words created from the raw tweets.

'Chess like' Betsy program using Python (GitHub Link) — **Oct 2020**
Predict the next best move from all possible moves on Betsy, a simplified version of chess, within a limited time. The heuristic uses the Minimax algorithm with Alpha-Beta pruning to verify the best move for a player from all possible moves.