Antara Tewary

✉ atewary@gmu.edu ◉ Portfolio ○ StringAna in tewaryantara

Technical Skills

- **Programming Languages & Frameworks:** Python, JavaScript, Powershell, React, Node.js, Next.js, C#(.NET), Express.js
- **Data Management & Processing:** MongoDB, PostgreSQL, SQL Server, Hadoop, Apache Spark, MapReduce, Elastic Search, Pandas, NumPy, SciPy, Matplotlib, Seaborn, Tableau, Power BI
- **Cloud, DevOps & Infrastructure:** Azure (AVD, Storage, Logic Apps, SQL Databases, Functions), AWS (EC2, S3, Lambda, RDS, Cloud Formation, IAM, Load Balancers), Git, Gitlab, CI/CD, Docker, Kubernetes
- **AI, Machine Learning & NLP:** Natural Language Processing, Neural Networks, Deep Learning, RNNs, LSTMs, Transformers, Recommender Systems, TensorFlow, PyTorch, Keras, scikit-learn, NLTK, spaCy, Language Modeling, Word Embeddings, Tokenization, Text Generation, LangChain, Model Evaluation, Retrieval-Augmented Generation(RAG)
- **Automation, Security & Best Practices:** UiPath Studio, Orchestrator, Micro Focus Operations Orchestration, User Authentication, Authorization, Agile methodologies, Scrum, SOLID principles, Design Patterns.

Education

George Mason University
Fairfax, United States
MS in Computer Science, ML Concentration *Aug 2023 – May 2025*
Courses: Mining Massive Datasets with MapReduce, Advanced NLP, Machine Learning, Data Mining, Artificial Intelligence
*Honors: Honors details — **GPA: 4.0/4.0** ↗*

PES College of Engineering
India
BS in Computer Science *Aug 2016 – July 2020*
Courses: C/C++,DBMS,Network Systems,SDLC,Artificial Intelligence
Honors: Honors details — GPA: 3.5/4.0

Professional Experience

George Mason University College of Engineering and Computing
Fairfax, United States
Graduate Teaching Assistant - Systems Programming *Sept 2024 - Present*
- **Developed** and **delivered** engaging curriculum for graduate-level systems programming course, focusing on hands-on learning and **advanced data structures**; **introduced innovative teaching methods** to make complex topics like **memory management** and **multithreading** more accessible, resulting in a **20% increase in student engagement** and **improved comprehension** of low-level programming concepts.
- **Fostered inclusive learning environment** for diverse group of graduate students; provided **clear, patient guidance** on challenging systems programming topics, **bridging gap between theory and practical application**; **mentored students** through hands-on projects and **collaborative learning**, resulting in **increased confidence** in their systems development abilities and **enhanced preparation for industry roles**.

George Mason University Fiscal Services
Fairfax, United States
Business Automation Intern *Oct 2023 – Sept 2024*
- **Led** cross-functional team to implement **automated data pipeline** using **Power Query** for bank reconciliation, **freeing 215 hours annually** and improving data accuracy for enhanced decision-making.
- **Developed** and **deployed** RPA solution automating 2,000 check cancellations in financial operations, ensuring compliance and **saving 330 hours per year**, enabling focus on high-value tasks.
- **Managed** project to implement **automation solution** for refund posting in financial ERP system, **reducing processing time by 416 hours annually** and enhancing student account updates.
- **Facilitated** stakeholder meetings and delivered clear reports on cross-departmental projects, **increasing project approval rates by 20%** and ensuring smoother execution across teams.
- Served as **liaison** between technical teams and business units, applying **project management** best practices, resulting in **15% reduction in project timelines** and increased productivity.

Mercedes Benz Research and Development
Bangalore, India
Software Consultant *Oct 2020 – July 2023*
- **Analyzed** user engagement data using **regression** and **clustering models**, **identifying** usage patterns and improvement areas, resulting in **20% increased** accuracy and customer satisfaction.
- **Enhanced** data reliability through rigorous **manipulation** and **preprocessing** of user statistics and reported issues, **improving** data reliability by **15%** and **increasing** feature enhancement efficiency by **25%**.
- **Implemented** innovative **algorithms** for **Digital Drawing** project, **reducing** production time by **40%** and delivering **8-10 user-centric features**, significantly enhancing user experience.
- **Designed automation solutions** for the **KaDHerald Project**, integrating **orchestration platforms** to streamline tasks, resulting in a **20% increase** in operational efficiency.

Projects

- ### Workspace Archiver 🔗 ⬀
  Code snapshots for productivity enhancement *Aug 2024*
  - Developed **Workspace Archiver**, an extension for Visual Studio Code that allows users to **snapshot their codebase** and enhance productivity through **LLM insights**, resulting in streamlined project management and code tracking.
  - Designed a user-friendly interface that prompts users to **archive** their codebase upon project opening, improving user engagement and ensuring consistent updates to the `workspaceArchiver.txt` file for non-ignored files, enhancing the reliability of version control.

- ### Spotifind 🔗
  Match with users who share your music taste using a custom-built recommender system *Jul 2024*
  - **Developed** and **deployed SpotiFind**, a **full-stack web application** using **Python**, **Streamlit**, and the **Spotify API**.
  - **Engineered** a custom **collaborative filtering recommender system** to match users based on their music preferences, utilizing **Scikit-learn** for machine learning algorithms and **Pandas** for data preprocessing.
  - **Integrated Flask** as a lightweight backend for handling API requests and **Streamlit** for the frontend interface.

- ### Leetcode Calendar 🔗 ⬀
  Visualized LeetCode consistency with an npm package for showcasing coding progress. *June 2024*
  - Developed an npm package to visually showcase LeetCode problem-solving consistency through a **sleek, customizable calendar,** enhancing coding portfolios with a **visual representation** of dedication and skills.
  - **Engineered** the package with **customizable UI components**, **API integration**, and **responsive design**.

Certifications and Awards

- ### Process Innovation Award Winner ⬀
  POC @ Mercedes Benz: Pathfinder *Mar 2022*
  - Developed a sophisticated **algorithm** leveraging **advanced graph theory** and optimization techniques to revolutionize automotive design.
  - The algorithm **dynamically** computes the **most efficient routing** for complex networks of wires, pipes, and components within car engines, simultaneously **minimizing spatial requirements** and maximizing fluid dynamics.
  - This innovation significantly enhanced engine efficiency, **reduced manufacturing complexity**, and optimized overall vehicle performance.

- ### Microsoft AZ 900 ⬀
  Azure fundamentals,cloud computing, Azure services, and cloud security *Jun 2022*

Extra-Curriculars

- ### Google Developer Group at GMU ⬀ Fairfax, United States
  Co-Lead *Sept 2023 – Present*
  - Increasing student engagement in tech through workshops, hackathons, and networking events.
  - Collaborating with industry professionals to provide real-world insights and career opportunities.
  - Recruiting and mentoring new members to foster a supportive and inclusive community.