

Tanya Singh

Sterling, Virginia | ✉ tanya.singh89200@gmail.com | ☎ (202) 945 - 8651 | 🌐 www.linkedin.com/in/tanya-singh8920

EDUCATION

University of Maryland, College Park

College Park, MD

Graduation Date: May 2027

Bachelor of Science in Computer Science, Minor in General Business

GPA: 3.985, Dean's List

- Relevant Coursework: Object-Oriented Programming, Applied Probability and Statistics, Discrete Structures, Computer Systems, Linear Algebra, Organization of Programming Languages, Algorithms, Data Science, Advanced Data Structures
- Leadership: Committee Member at Association for Women in Computing, Marketing Lead at Google Developer Student Club, Committee Head at Campus Coders Crew, Researcher in the First-Year Innovation & Research Experience

SKILLS

- **Languages and IDEs:** Java, C, Assembly, R, Ocaml, MATLAB, Python, HTML, CSS, JavaScript, React, Eclipse, RStudio, VS Code, GitHub
- **Certifications:** PowerPoint Office 2019 MOS Certification, Word Office 2019 MOS Certification, Excel Office 2019 MOS Certification, Microsoft Specialist - Associate
- **Workspaces and Applications:** AzureDevOps, ServiceNow, Google Workspace, Microsoft, Mathematica, Windows and Macintosh Systems
- **General:** Research, Data/Statistical Analysis, Collaboration, Critical Thinking, Teamwork, Strong Work Ethic, Problem Solving, Communication

WORK EXPERIENCE

Navy Federal Credit Union

Vienna, VA

May 2026 - August 2026

Summer Associate Intern

- Deployed a M365 Copilot-powered Zero Trust AI Assistant that provides cited answers on 29 active projects, 45 capabilities, and 152 activities.
- Designed a metadata-driven knowledge base by cataloging 84 Zero Trust documents and standardizing AI retrieval across teams and work-streams.
- Reduced AI response times by 90%+ by cutting retrieval latency from 2+ minutes to 10 seconds through prompt engineering and optimization.

Lavner Education

Washington, DC

June 2025 - August 2025

Intern/Instructor

- Delivered quality instruction to 120+ students regarding Coding topics, STEM & Medicine, All-Girls STEAM, Robotics and more.
- Mastered a hands-on curriculum in order to provide a one-on-one learning experience to 40+ students regarding STEM subjects.
- Led set-up and maintenance of the on-site check-in software, computer software, and computer hardware, increasing the work efficiency by 20%.

Easy Dynamics

McLean, VA

January 2025 - January 2025

Intern

- Conducted a research project regarding the ability of 4+ LLMs to help researchers find and collect information regarding payroll threat/fraud.
- Prompted and modified 12+ research questions regarding payroll threat/fraud to analyze the strengths and weaknesses of 4+ LLM model.
- Developed a proposal presentation on findings regarding the use of LLMs to conduct payroll threat/fraud research using 3+ Microsoft applications.

Code Ninjas

Leesburg, VA

November 2022 - November 2023

Code Sensei

- Encouraged 50+ students from ages 5-14 to explore and understand programming languages such as Scratch, JavaScript, C#, and more.
- Learned a hands-on curriculum in order to familiarize students with 5+ software platforms such as Roblox Studio, MCreator, and Unity.

PROJECTS

Machine Learning Stroke Risk Prediction | Python

2026

- Developed an end-to-end machine learning pipeline in Python using pandas, NumPy, and scikit-learn to predict stroke risk from healthcare data. Implemented data preprocessing, feature engineering, feature scaling, Random Forest, and Logistic Regression models, evaluating performance with classification metrics and feature importance analysis to improve model interpretability.

MicroCaml Lexer, Parser, and Interpreter | Ocaml

2025

- Developed an OCaml-like dynamically typed programming language by building a full lexer, recursive-descent parser, and interpreter. This project emphasized language design principles, grammar-based parsing, lexical scoping, closure formation, and environment-based evaluation while reinforcing core concepts in programming language implementation.

EL Malloc: Performance Optimization & Multithreading | C

2025

- Designed and implemented a custom dynamic memory allocator (EL Malloc) in C to explore explicit memory management and system-level optimization. Applied multithreading with pthreads to build a matrix normalizer that benchmarked allocator performance, gaining experience with concurrency, synchronization, and cache efficiency in computational workloads.

Personal Portfolio | HTML, CSS, JavaScript, React

2025

- Created a fully responsive and interactive personal website that was built from scratch using HTML, CSS, JavaScript, and React. Features modern design principles, smooth animations, and dynamic content presentation to showcase professional experience and skills, gaining hands-on expertise in front-end development and UI/UX design.

RESEARCH

Effectiveness of Large Language Models (LLMs) in Weather Forecasting for Arlington, VA | R, Python, MATLAB

2025

- Conducted an independent research study evaluating the effectiveness of Large Language Models (GPT-5, Claude Sonnet 4, and Gemini 2.5 Pro) in predicting weather patterns in Arlington, VA. Prompted each model to generate daily forecasts, compiled and cleaned the resulting data, and performed paired t-tests in R to assess accuracy against actual weather outcomes. Gained experience in experimental design, data-driven analysis, and statistical evaluation of AI model performance.