Rano Marufova

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SUMMARY

Computing generalist with a B.S. in Computer Science and B.A. in Business Management, currently a Data Specialist at Washington College's Center for Environment & Society building user-focused geospatial web applications. Experienced in Python, Databases, React, and GIS.

EDUCATION

Washington College   **Chestertown, MD, USA**
B.S. in Computer Science & B.A. in Business Management   *Aug 2020 – Dec 2023*
Minor: Data Science — GPA: 3.8/4.0

- Graduated *magna cum laude*.
- Senior Thesis: *Bitcoin: Critical Analysis of a Decentralized Monetary System*.

TECHNICAL SKILLS

Programming & Scripting: Python (pandas, scikit-learn, matplotlib), JavaScript/TypeScript (React, Node), PHP (Laravel), Java, SQL, HTML/CSS
Geospatial: ArcGIS Pro, ArcGIS Online, ArcPy, QGIS, OpenStreetMap API, geocoding & network analysis
Web & Cloud: RESTful APIs, Firebase (Auth, Firestore, Hosting), Google Cloud Functions, Microsoft IIS (ARR & URL Rewrite), Git/GitHub CI
Visualization & Reporting: Tableau, Excel (pivot tables, dashboards), interactive web maps, infographic design
Design: Figma, Canva, Microsoft PowerPoint

WORK EXPERIENCE

Data Specialist

Washington College CES, Chestertown, MD   *March 2024 - Present (35h/week)*

- Develop and maintain user-focused web applications, translating complex geospatial datasets into interactive visual experiences to support research and decision-making.
- Lead the integration of GIS tools like ArcGIS Pro and Python libraries to automate workflows, streamline data processing, and improve operational efficiency.
- Collaborate with faculty, staff, and external stakeholders to design innovative mapping solutions that enhance public access to geospatial data.
- Provided training on GIS tools and mentored 9 student interns over a period of 2 years.

GIS Analyst Intern

Washington College Geospatial Innovation Program,   *February 2022 - December 2023*
Chestertown, MD   *(15h/week)*

- Processed and analyzed high-volume transportation datasets, including vehicle crash and stop data, using ArcGIS Pro to inform safety initiatives for the Maryland Highway Safety Office.
- Contributed to the design and development of infographics, ensuring clear and accurate visualization of geospatial data for stakeholder presentations.

Research Assistant

Toll Fellowship, Washington College   *May 2023 - July 2023 (40h/week)*

- Applied Machine Learning algorithms (e.g., boosted decision trees) to simulated data from ATLAS at CERN, optimizing background rejection and signal efficiency for Di-Higgs boson research
- Updated and maintained the lab website using HTML, CSS, and JavaScript, ensuring mobile responsiveness for improved user experience.

Ideaworks Consultant

Washington College Ideaworks MakersSpace, Chestertown, MD   *February 2022 – December 2023*

- Helped students with makerspace production workflows such as audio/video capture and editing, 3D printing, and laser cutting.

International Student Guide
Washington College, Chestertown, MD 2022, 2023
- Mentored incoming international students during students orientation week, coordinated check-ins, connected students to campus facilities, and organized events.

HONORS & AWARDS

- Tai Sung An Memorial Prize (2024).

- Libby & Douglass Cater Society Fellowship — received three research grants totaling $13,000 (2023).

- Washington College Dean's List (2020–2023).

- Omicron Delta Kappa (ODK) Leadership Honor Society (2022).

- William B. Johnson Internship Fund (2022).

- Francis Waters Leadership Scholarship (2021).

PRESENTATIONS

- Presenter, TuGIS Conference — "Preserving Local Ecosystems Through Collaborative Data Management. (Baltimore, Aug 2025)"

- Presenter, Fall Family Weekend Poster Session — "Classification of Signal and Background in Search for Di-Higgs Boson at the Large Hadron Collider" (Chestertown, Oct 2023).

SELECTED PROJECTS

Student Attendance Management App — Developed for Alpha Tibbiyot Tehnikummi (Uzbekistan); used to manage ∼600 students to replace manual attendance tracking and calculations.

Grants Finding and AI Analysis App — Interactive app that scrapes grant websites with predefined keyword matching, analyzes the compatibility with the Organization's Services utilizing Google Vertex AI, gives a compatibility rating, and sends daily reports for new grant findings.

Chestertown Trees Survey App — Link — Developed a data collection and visualization tool for community tree inventories.

Washington College GIP Website — Link — Hub site centralizing projects, maps, and data from the Geospatial Innovation Program.

GIS Trivia Web App — GitHub — Live — Interactive quiz platform teaching GIS concepts through geospatial questions.

Kent County Museums Driving Tour Web Map — Link — Built a public-facing interactive web map showcasing regional museums.

LEADERSHIP & SERVICE

Co-Founder & President, STEM Sisters Club — Washington College (2022–2023): Organized workshops and networking events to support women in STEM.

Vice President, Makers Union — Washington College (2022): Led projects in 3D printing and laser cutting.

English as a Second Language (ESL) Instructor — Tashkent, Uzbekistan (2016–2018): Designed curriculum and taught English to classes of 10–12-year-olds; delivered paid instruction to improve students' speaking and writing skills.

MEDIA Mentions

"New Club Creates Safe Space for Women in STEM." The Elm, Washington College (Feb 2022) – Featured as Co-Founder & President of STEM Sisters Club. Link

"GIP Launches a Tree Survey App for the Town of Chestertown." Washington College News (2023) – Highlighted for leading app development at the Geospatial Innovation Program. Link

LANGUAGES

English (fluent) — Uzbek (native) — Russian (fluent)