

Alex Hetrick

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• Greensburg, PA
• ventuar.com

EDUCATION

B.S. Software Engineering, Rochester Institute of Technology | Minor in Philosophy | Exp. **May 2026** | GPA: 3.96

SKILLS

Languages: TypeScript, JavaScript, Python, Java, C#, C, PostgreSQL, HTML, CSS

Tools & Frameworks: React, Angular, TailwindCSS, ChakraUI, NestJS, Scrum, REST APIs, Git, Jira

PROFESSIONAL EXPERIENCE

Full-Stack Developer Co-op

Jan 2024 - Aug 2024

▼ BMW Group | Greer, SC

bmwchargeforward.com

Contributed to the BMW ChargeForward project, a smart-charge optimization engine for scheduled charging of BMW electric vehicles, collaborating with a multi-disciplinary team to deliver and enhance critical features

- Led development on the front end for ChargeForward's integration into the My BMW mobile app, constructing ~30 screens and eliminating 50+ defects through rigorous user testing
- Expanded and refactored core functionality across three separate software projects, significantly improving code quality, scalability, and system performance
- Conducted proactive user testing, collaboratively analyzed feedback, and implemented targeted UX improvements
- Engaged frequently with product owners to pitch new features, lead problem-solving discussions, and regularly demo progress, ensuring alignment with project goals

Tools: React, Angular, TypeScript, Nest.js, PostgreSQL, HTML, SCSS, Chakra UI, PrimeNG, Jira, Figma

Technology Intern

June 2023 - Aug 2023

▼ M&T Bank | Buffalo, NY

Collaborated with interns and full-time staff to automate SQL Server Integration Services (SSIS) package deployment using DevOps practices

- Created a GitLab CI/CD pipeline that reduced deployment time for SSIS packages by 95%, with additional verification checks and rollback capabilities for DEV, CERT, and PROD environments
- Developed a Python tool to autonomously integrate the pipeline into SSIS package repositories via the GitLab API
- Laid the groundwork to automate package deployment for 500+ packages bank-wide, potentially saving ~2000 hours of development time annually, reducing 90% of human error risks, and saving up to \$1.5 million annually

Tools: GitLab, Python, YAML, SQL, Postman, Jira, Confluence

AI/ML Implementation Specialist

Dec 2022 - June 2023

▼ RIT AWARE Lab | Rochester, NY

icmab.github.io/MABEL

Led a 3-student team on an NSF-funded research project developing a novel evaluation mechanism for Multi-Armed Bandit (MAB) machine learning models

- Created the Multi-Armed Bandit Evaluator (MABEL): A system that evaluates MAB models' proficiency in real-time detection of compromised/faulty distance sensor readings in a simulation of autonomous connected vehicles
- Implemented and assessed 6 unique MAB models, referencing academic papers to ensure model accuracy
- Showcased and presented MABEL at two conferences to an audience of diverse ages and backgrounds

Tools: Python, Numpy, Pandas, Plotly, Git

PROJECTS

Low Poly Underwater Pack

u3d.as/2B70

Developed and publicly released a comprehensive toolkit of underwater-themed scripts and resources for game developers. Currently for sale on the Unity Asset Store and CGTrader

- Amassed over 250 sales with an average store rating of 4.88/5.0 stars
- Designed a dynamic Boids algorithm-based AI for real-time flocking fish simulation with dynamic obstacle detection
- Utilized GPU computing to develop procedural water generation, integrating custom lighting and shading techniques
- Facilitated communication with clients over email, closing 40+ support requests and bug reports

Tools: Unity, Blender, C#, HLSL, Git, Trello, Notion, Inkscape