Micah Brody

Computer Science and Math student interested in conducting research in theoretical cryptography. Specific areas of interest include certified deletion, multi-party computation, and anonymous credentials.

Education

2020 – 2024 **Bradley University**, Bachelors of Science
Double Major in Computer Science and Math
Dean's list 2020-2023 | GPA: 3.9

Experience

August 2023 – Present **Embedded Model Performance Optimization**, *Bradley University*, Peoria, IL
- Applying statistical methods and machine learning models to solve non-linear problems
- Developing strategies and techniques to compare accuracy and compute time between models
- Designing software to predict performance and resource utilization of models on arbitrary software

September 2023 **Bradley University Math Colloquium**, *Bradley University*, Peoria, IL
- "A Post-Quantum Mercurial Signature for Delegatable Semi-Anonymous Credentials"
- Presented lecture about research findings to the Bradley University Mathematics Department
- Engaged with audience and received positive feedback from peers

June 2023 – July 2023 **Cryptography REU**, *Clemson University*, Clemson, SC
- Created a post-quantum mercurial signature scheme and applied it to anonymous credentials
- Wrote a research paper and submitted it for publication *(currently in submission)*
- Presented findings at the Clemson University Undergraduate Research Symposium

June 2022 – Aug 2022 **Cybersecurity REU**, *Oakland University*, Rochester Hills, MI
- Read and analyzed researched papers about distributed ledger technology
- Developed prototype of distributed system for employee and student time sheet data
- Presented research project at Mid-Sure Symposium, Michigan State University

Aug 2022 **Topology and Knot Theory Workshop**, *Notre Dame*, South Bend, IN
- Learned the foundations of topology and knot theory
- Proposed new questions within topology and knot theory
- Worked with Notre Dame professors and graduate students to solve problems

Sept 2021 – Dec 2021 **Automated Lawn Care Robot**, *Bradley University*, Peoria, IL
- Developed a neural network to detect weeds in a video feed
- Trained machine learning model using Google Tensorflow
- Worked with team to implement software on the robot

Jan 2020 – June 2021 **Web Design Consultant**, *Self-Employed*, Deerfield, IL
- Design and develop e-commerce websites for startups and small businesses
- Communicate with companies to figure out needs and requirements
- Assist companies with further changes and implementation

Skills:

- Works well with others and has strong communication skills
- Conveys technical and mathematical content in an easy-to-understand manner
- Creative thinking and problem solving

Affiliations:

- IACR Member
- Crypto 2023 Attendee

Programming Languages and Tools:

- C and C++
- Java
- Python
- Q#
- HTML
- R
- LaTeX
- MATLAB
- SQL