ALEXANDRU D. BELOIU

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EDUCATION

University of Michigan, Rackham Graduate School, Ann Arbor, MI
MSE Computer Science and Engineering **Sep 2023 – Apr 2024**

- Artificial Intelligence, Advanced Computer Vision, Natural Language Processing, Parallel Computing, Advanced Compilers

University of Michigan, College of Engineering, Ann Arbor, MI, GPA**:** 3.71/4.0
BSE Computer Science **Sep 2020 – Apr 2023**

- Machine Learning, Computer Vision, Parallel Programming with GPUs, Embedded Systems, Web Systems and Databases, Data Structures and Algorithms, Computer Organization, Foundations of Computer Science
- Awards: Lion DAO's LionHACK (Best DeFi Hack), Hewlett-Packard Enterprises Employer Challenge (1st Place), Dean's List

PROFESSIONAL EXPERIENCE

Palantir Technologies, New York, NY
Software Engineer Intern **May 2023 – Aug 2023**

- Created user-facing REST APIs for the Palantir Foundry Ontology, utilizing TypeScript and Java to enable the seamless interaction and efficient processing of large datasets with multiple data structures across multiple platforms
- Designed system architecture and implemented Object Set and Time Series support in the TypeScript-OSDK, a tool for automatic code generation and prototyping in TypeScript, enabling powerful workflows and driving product adoption

University of Michigan, College of Engineering, Ann Arbor, MI
Instructional Aide – EECS 270 Logic Design **Sep 2020 – Apr 2023**

- Managed lab sessions and guided students through lab exercises employing Verilog and utilizing FPGA

Ford Motor Company, Dearborn, MI
Software Engineer Intern **May 2022 – Aug 2022**

- Developed apps and widgets for the Ford SYNC 4 Infotainment System leveraging React Native, C++, and Unreal Engine 4
- Designed and implemented the Virtual Keyboard app including UML class and sequence diagrams, UI interface, and TCP/IP communication with back-end micro-service and rendering engine

Robert Bosch LLC, Plymouth, MI
Software Engineer Intern **Jun 2021 – Aug 2021**

- Contributed to development of ADAS and autonomous driving tools using JavaScript, Python, Pandas, Plotly, and Dash
- Devised a data-analytics and visualization tool to evaluate statistics and accuracy of computer vision algorithms for object detection and identification from video camera images

ACTIVITIES

Blockchain at Michigan - Project Manager & Technical Education Lead **Jun 2020 – Present**

- Competed at Lion DAO's LionHACK at Columbia University; Terra Hacker House, Chicago; Hack the North, Waterloo
- Consulted for Microsoft (Winter 2022) and TRM Labs (Fall 2020) and led training activities of new team members

UofM MiTEE CubeSat Mission - Undergraduate Researcher Team Lead **Jan 2021 – Apr 2022**

- Worked under Dr. Brian Gilchrist to research and develop new propulsion technologies for micro-satellites
- Led microsystems team, built computer architecture of the MiTEE-2 Satellite and programmed an ARM embedded microprocessor employing C to minimize complexity and maximize efficiency and modularity of new system

UofM Solar Car - Embedded Systems Engineer **Sep 2020 – Apr 2022**

PROJECTS and PUBLICATIONS

Counterpoint Checker App

- Constructed an interactive web app to auto-grade music theory assignments using React and Python Flask REST APIs
- Awarded project funding from optiMize.org and ArtsEngine for innovation and creativity

Numoen Protocol App

- Devised an Automated Market Maker allowing liquidity providers hedge against impermanent loss with variance swaps
- Built a React and Web3 website to interface with EVM solidity smart contracts allowing for swaps and liquidity pooling

Research Publication

- Li, G., et al., **Beloiu, A**. and Gilchrist, B., Lessons Learned from the Development and Flight of the First Miniature Tethered Electrodynamics Experiment (MiTEE-1), 35th Annual Small Satellite Conference, UT, August 2021

SKILLS

- **Languages:** Java, TypeScript, Python, C++, C, React Native, JavaScript, HTML, SQL, CSS, Solidity, Verilog, ARM Assembly
- **Frameworks:** React.js, Node.js, Web3, CUDA, Unreal Engine 4, Flask, NumPy, Pandas, OpenCV, PyTorch, AWS, GCP, UNIX
- Experience with designing, developing, and deploying scalable Web Services, Machine Learning, Embedded Systems, System Architecture Design, UML, TCP/IP, REST APIs, GIT, JIRA, Agile, Scrum methodologies, and Blockchain