Joseph Boidy

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github.com/LeBoid | leboid.github.io/Portfolio

SUMMARY

Computer engineering student at University of Oklahoma with strong programming skills in C, C++ and Python, and hands-on experience in digital design and embedded systems. Developed real-time object detection models and optimized inference on edge devices, and implemented pointer-based data structures in M-Tree projects. Seeking a Summer 2026 hardware engineering internship in SoC and digital design.

SKILLS / CERTIFICATIONS

- **Languages:** C, C++, Java, Python, HTML/CSS, SQL, Verilog, SystemVerilog
- **Developer Tools:** VS Code, Gephi, Eclipse, Jupyter Notebook, RStudio, MobaXterm, TensorFlow, Roboflow
- **Certifications:** Undergraduate Data Science and Analytics Certificate, Google Certification of Analytics
- **Hardware Engineering:** GPU Engineering, SoC Systems Engineering

EDUCATION

University of Oklahoma, Gallogly College of Engineering, OK **Jan 2023 - May 2027**

Bachelor of Science, Computer Engineering (GPA: 3.05/4.00)

- **Coursework:** Machine Learning, Electrical Circuits II, Elec/Comp Engr Circuits Lab, Signals and Systems, Algorithm Analysis, Big Data Engineering, Microprocessor System Design, Introductory Electronics, Artificial Intelligence, Electrical Circuit I, Data Structures & Algorithms, Discrete Structures, Digital Design, Digital Signal and Filtering, Programming Structures and Abstractions, Probability & Statistics, Random Processing

AWARDS & HONORS

- O-K-U Award NRTW, University of Oklahoma
- William H. Barkow Scholarship, University of Oklahoma
- Work Assistance NRTW, University of Oklahoma
- Merle Ward Lucas Memorial Engineering Scholarship, University of Oklahoma

RELEVANT PROJECTS

Research Assistant | ***University of Oklahoma*** **Jun 2024 - Aug 2024**

- Collaborated with Dr. Cheng Samuel and the Data Institute for Societal Challenges to research disinformation on YouTube.
- Used YouTube Data API to collect metadata, comments, and video statistics on flagged content.
- Developed Python scripts for data scraping, cleaning, and preprocessing.

Object Detection Model using YOLOv8 **Oct 2025**

- Developed an object detection model using YOLOv8 architecture for real-time image classification and localization.
- Created comprehensive Jupyter notebook implementing data preprocessing, model training, and evaluation pipelines.
- Optimized hyperparameters and fine-tuned model performance for improved accuracy and inference speed.

Multiway Search Tree (M-Tree) | github.com/LeBoid/MTree-Project **Oct 2024**

- Built dynamic tree balancing via rebuild operations for large datasets.
- Applied memory management and pointer-based tree structures.
- GitHub: github.com/LeBoid/MTree-Project

Autonomous Road Navigation with NVIDIA JetBot | Team 4 JetBot Project **Jan 2025 - Mar 2025**

- Developed road-following navigation using ResNet18-based regression for steering control.
- Integrated TensorRT-optimized models for real-time inference on edge devices.
- Implemented object avoidance with pre-trained collision detection models.
- Documented limitations of person-following due to broken dependencies.
- GitHub: Team 4 JetBot Project

LEADERSHIP EXPERIENCE

University of Oklahoma, Norman, OK | ***Student Supervisor, Residential College (Dunham/Headington)*** **Mar 2023 - Present**

- Leading Staff - Led kitchen staff to ensure efficient operations within company guidelines.
- Quality Assurance - Conducted routine food safety and storage inspections.
- Training and Development - Designed training programs for new hires and mentored junior staff.
- Conflict Resolution - Mediated staff conflicts and maintained team morale.