Ian Sabolik

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EDUCATION

Texas A&M University - College Station, TX   August 2020 – May 2024
Bachelor of Science in Computer Science - Minors: Cybersecurity, Mathematics   3.57 *GPA*

EXPERIENCE

Machine Learning Research Intern   June 2023 – August 2023
Texas A&M University   *College Station, TX*
- Worked on development of BoxHED2.0, a software package for non-parametrically estimating hazard functions via gradient-boosted trees
- Translated 400+ lines of Python preprocessing code into R, enabling cross-platform compatibility and facilitating collaboration with R-centric researchers
- Wrote wrapper code to allow over 90% of computations to be done by C++ code, while still interfacing with R, allowing for more efficient computations
- Exceeded expectations by creating a detailed presentation outlining 100% of preprocessing steps and Python implementations for machine learning model

Software Engineer   January 2023 – May 2023
MOVE Texas A&M   *College Station, TX*
- Made a full-stack web application using Ruby on Rails, PostgreSQL, and Docker for the MOVE Texas A&M student organization in an 18-week Software Engineering class
- Cooperated with a team of four other students to create an efficient system for organizing events, tracking attendance, and managing activities for over 100 members
- Reduced administrative workload by 50% by automating manual processes and integrating third-party APIs
- Utilized GitHub for version control, continuous integration, and deployment to Heroku, resulting in a 20% reduction in development time
- Integrated application with Google Calendar, enabling automatic synchronization of events

PROJECTS

Predictive Modeling with Machine Learning | *Neural Networks, PyTorch, Python*   January 2023 – May 2023
- Aligned with two others to develop a highly effective machine learning model for predicting in-hospital mortality based on clinical health data (AUC-ROC score: 0.91522)
- Standardized and preprocessed a subset of eICU dataset with 50 columns of numerical data
- Implemented optimized neural network with tuned hyperparameters and Adam optimizer
- Solved imbalanced data challenge through effective oversampling technique
- Demonstrated meticulous approach to hyperparameter tuning for optimal model performance

Ray Tracer | *Computer Graphics, Advanced Trigonometry, C++*   January 2023 – May 2023
- Developed a C++ program, utilizing ray tracing algorithms to generate images
- Included lighting and shadows, utilizing linear algebra methods to support multiple light sources
- Generated reflective spheres, accurately capturing scene reflections with up to ten layers of recursion

Point of Sale System | *React.js, JavaScript, PostgreSQL, Python, Git*   August 2022 – December 2022
- Collaborated with a team of six in a school project to design and program a point-of-sale system with a PostgreSQL database
- Built a front-end website with React.js, connected to back-end, built on Express.js
- Programmed Python scripts to populate a database with 1000+ data samples of simulated orders

SKILLS

Developer Tools: AWS, Docker, Git, GitHub, Jira, Trello, Asana, VS Code
Frameworks: Express.js, Node.js, PyTorch, TensorFlow, React, Ruby on Rails
Languages: C++, HTML5, CSS, Java, JavaScript, Python, R, Ruby, SQL (MySQL, PostgreSQL), TypeScript
Methodologies: Agile, Scrum, Waterfall, CI/CD, Test-Driven Development
Awards: 2020 National Merit Finalist
Soft Skills: Communication, Leadership, Problem-Solving, Time Management
Coursework: Artificial Intelligence, Cloud Computing, Computer and Network Security, Computer Organization, Computer Systems, Data Structures and Algorithms, Machine Learning, Networking, Software Engineering