John Hoeksema
Software Engineer

CONTACT

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EMPLOYMENT

Software Requirements Engineer
Gentex April 2024 - January 2026

- Developed greenfield state machine requirements for the next gen Video Processing software
- Developed software requirements for 4 LCD Mirror product lines used in over 60,000 vehicles annually
- Lead the Video Processing team and managed product scope for 2 weeks in the Project Manager's absence

Software Analyst
Accenture Federal Services August 2021 - September 2022

- Scripted mass emailing to decrease time cost for the Department of Veterans Affairs Digital GI Bill project
- Performed data analysis and implemented Decision Tree machine learning on veteran data

NLP Developer, Intern
X2AI Spring 2020

- Trained BERT neural net to detect emotional valence in 4000+ text messages with 90+% accuracy
- Structured and tested data preprocessing pipeline that expanded contractions, eliminated filler words, and used lemmatization and tokenization

Drone Researcher
Department of Computer Science, University of Notre Dame Summer 2019

- Developed code for drone fleet emergency response system for use by the South Bend Fire Department
- Implemented basic computer communication with network configurations and routing algorithms

PROJECTS

Explore Mars Spring 2026

- Built a 3D Mars globe with 20 GB of terrain imagery, CloudFront + S3, and 2,000+ searchable features
- Optimized render performance by batching draw calls and reducing rover datapoints from 50,000 to 500
- Engineered mobile-first UI/UX with custom touch controls and progressive terrain loading

Notre Dame Rocketry Team Fall 2017 - Fall 2019
Safety Co-Lead Fall 2018 - Spring 2019

- Ensured the safety of 40 team members through tool use manuals, materials safety data sheets, launch checklists, mandatory launch quizzes, and a leadership-enforced culture of safety.

EDUCATION

University of Notre Dame May 2021

- Bachelor of Science for Computer Science, GPA: 3.6
- Relevant Coursework: Algorithms, Data Structures, Databases, Operating Systems, Artificial Intelligence, Computer Vision, Droid Building, Human Computer Interaction, Design Thinking

SKILLS

Proficient: TypeScript, React, Python, Git, AI-Assisted Development, Data Preprocessing
Familiar: C/C++, PyTorch, SQL, Linux, Go, Raspberry Pi/Arduino, Jira