

Oliver Grudzinski

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SUMMARY

B.S. Computer Science Junior Student at MSOE with experience in AI/ML, data analysis, and full-stack development. Gained extensive experience in full-stack development and machine learning through an internship at TESCHGlobal. Dedicate eight hours per week to the MSOE AI Club and the Society of Software Engineers. Also achieved the rank of Eagle Scout through many years of dedication. Most fluent skills are in machine learning and web development, including building systems with Python, Java, LLMs, and CI/CD pipelines, as well as developing modern, scalable frontends and APIs using React, TS, and Node.js

EDUCATION

B.S. Computer Science | Milwaukee School of Engineering | GPA: 3.19 | Expected May 2027

H.S. Diploma | Cedarburg High School | Cedarburg, Wisconsin | June 2023

INTERNSHIP EXPERIENCE

Full Stack Software Development Intern | TESCHGlobal | Grafton, WI | June 2025 – Present

Automated XML Schema Documentation Pipeline: Engineered an autonomous CI/CD pipeline to analyze, compare, and document XSD changes via Python and Machine Learning

- Built core inference engine for the RAG pipeline, performing data extraction to translate raw XML node differences into rich JSON objects representing the architectural changes.
- Implemented generative AI component with a grounding technique, leveraging an LLM to synthesize the retrieved JSON data into a technical analysis that explains the impact of schema changes.
- Deployed agentic workflow using GitHub Actions to reduce documentation time by over 95% by automating a 4-hour manual process into a 5-minute job.

Healthcare Web Application Development & FHIR Integration

- Developed clinical SPA features using React, TypeScript, and HL7 FHIR REST APIs.
- Collaborated in sprint cycles and daily standups as part of an Agile (Scrum) development team
- Enhanced Node.js BFF APIs supporting legacy Angular components.
- Improved reliability by boosting unit test coverage across React and Angular modules.

Inventory Systems Management Intern | Wisconsin Stamping & Manf. | June 2021 – June 2025

- Authored custom SQL queries to analyze historical inventory data and identifying slow-moving stock
- Maintained 99%+ inventory accuracy by performing daily cycle counts and reconciling discrepancies between physical stock and the ERP system.
- Built an automated low-stock alert system with scheduled SQL scripts to prevent production delays.

PROJECT EXPERIENCE

First Place - TruePrep Hackathon, CPA Agentic Research System (Team of 3): Developed an end-to-end, LLM-driven deep research assistant for tax return analysis and optimization using Python, LangChain, and PydanticAI that reduced overall CPA research time by an estimated 80%.

- Built a PDF ingestion pipeline with PyMuPDF to extract text and images from tax returns, encoding multimodal visual payloads for richer LLM context.
- Authored LangGraph state-machine workflows to decompose complex tax-law queries into structured subtasks that accelerated research by over 95%, resolving queries in minutes that typically take 3-5 hours.
- Implemented an iterative agent loop to construct section reports from reputable web search findings, that flag missed credits, and generate actionable tax-saving recommendations for CPAs and their clients.

Diabetes Prediction Using Random Forest

- Performed Kruskal-Wallis tests with Bonferroni correction to identify statistically significant predictors; retained Glucose, Age, and Pregnancies as key variables.
- Trained and optimized a Random Forest Classifier with hyperparameter tuning, achieving a 77.49% accuracy and F1 score of 0.6533 using greedy feature selection.
- Demonstrated that minimal clinical inputs can effectively predict diabetes outcomes, and outlined next steps including comparative models and SHAP-based interpretability.

Custom Wordle Game: Designed and implemented a fully featured Java-based Wordle game supporting players, administrators, and testers

- Built interactive gameplay mechanics with real-time visual feedback for 5-letter word guesses, including a Hard Mode that emphasizes logic and memory by hiding prior letters.
- Integrated an SQL database to store persistent game data, user guesses, and word sets; developed admin tools for analyzing guess trends and managing word pools.
- Implemented configuration and data exchange using JSON parsing, and structured the application for modular testing and automated I/O validation to support QA workflows.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, TypeScript, JavaScript, SQL

Web Development: React, Node.js, HTML, CSS, JavaFX, Vite

AI/ML: Scikit-learn, Pandas, NumPy, TensorFlow, LangChain, LangGraph, LLMs, Generative AI, RAG

Databases & Tools: Git, GitHub, GitHub Actions (CI/CD), MongoDB, SQL, Jupyter Notebooks

Development Methodologies: Agile (Scrum), Waterfall

CO-CURRICULAR INVOLVEMENT | COMMUNITY SERVICE

Eagle Scout | Scouts of America | 2015-2022 |

Researcher | MSOE AI Club (MAIC) | Sep 2023- Present | 6 hrs per wk

Member | Society of Software Engineers | 2024-Present | 2 hrs per wk