

# Henry Lee

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## EDUCATION

### Purdue University | West Lafayette, IN

GPA: 3.6/4.0

Bachelor of Science, Major in Computer Science, Minor in Mathematics

August 2023 – Now

- **Relevant Coursework:** Data Structures & Algorithms, Computer Architecture, C Programming, OOP, Discrete Mathematics, Multivariate Calculus, Linear Algebra, Statistics for Data Science, Algorithms Analysis, Numerical Methods, Computer Vision

## PROJECTS

### Digit Classifier | Python, NumPy, Matplotlib, scikit-learn, Jupyter Notebook, Flask

July 2025

- Achieved 97%+ accuracy on MNIST by implementing and tuning a neural network with scikit-learn
- Built a Flask web app enabling real-time digit classification by converting user-drawn canvas input into model-ready data
- Streamlined dataset preprocessing and visualization with NumPy and Matplotlib, improving debugging efficiency

### Ticket Search Utility | Python, Rust, Flask, SQL, ConnectWise API, CSV

April 2025 – August 2025

- Reduced ticket lookup time by 80% for Echopath LLC by building a Flask + SQL web platform to search 700K+ tickets and 1M+ notes
- Enabled near-instant queries by developing Rust-based ingestion pipelines and optimizing CSV processing
- Improved search accuracy by 50% by implementing advanced filters (author, resolution status) and optimizing SQL queries

### Financial Data Dashboard | Python, Tkinter, Excel, CSV, PyCharm

December 2024 - January 2025

- Automated processing of 500+ financial records, reducing manual reporting time by 60%
- Increased reliability by implementing validation and error handling for diverse Excel and CSV formats
- Built a Tkinter GUI to visualize and append financial data, streamlining workflows for non-technical users

## EXPERIENCE

### Software Engineering Intern

October 2024 – August 2025

Echopath LLC

Indianapolis, IN

- Automated financial and ticket workflows by developing Python applications, reducing processing time by 40%
- Improved database performance by applying normalization and indexing techniques, resulting in faster queries
- Delivered internal tools that increased operational efficiency and improved data accessibility for the engineering team

### Undergraduate Software Engineering Researcher

August 2024 – December 2024

Purdue University: The Data Mine

West Lafayette, IN

- Assisted in building a high-performance console program for AI/HPC workflows, reducing data retrieval time by 30%
- Designed a MongoDB-based data model to support scalable customer data access
- Researched features such as secure authentication and large-file transfer methods for integration with Google Cloud

### Undergraduate Data Science Researcher

January 2024 – May 2024

Purdue University: The Data Mine

West Lafayette, IN

- Detected and reported 900+ data mismatches between Wikidata and external sources using Python and SPARQL
- Improved data accuracy by integrating REST APIs to validate numerical attributes across datasets
- Contributed findings to the Wikidata Mismatch Finder, enhancing global data quality

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, JavaScript, HTML/CSS, R, Rust, MATLAB, C#

**Frameworks:** React, Node.js, Next.js, JUnit, Bootstrap, Flask

**Developer Tools:** Git, Visual Studio Code, PyCharm, IntelliJ, Eclipse, SQLite Studio

**Databases:** MySQL, MongoDB, SQLite

**Libraries:** pandas, numpy, matplotlib, scikit-learn