

# Aidan Johnson

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## Education

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### Master of Science in Computer Science

Expected May 2027

Washington State University, Pullman, WA

Specialization: *Software Engineering and Design*

Coursework: *Software Design, Advanced Programming Languages, Program Analysis, Artificial Intelligence*

GPA: 3.93 / 4.0

### Bachelor of Science in Computer Science

May 2025

Washington State University, Pullman, WA

Coursework: *Software Engineering, Data Structures and Algorithms, Data Science, Machine Learning*

## Skills

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**Programming Languages:** *Python, C#, Java, Haskell, SQL*

**Frameworks:** *PyTorch, Scikit-learn, Pandas/NumPy, .NET, MonoGame*

**Software Engineering:** *Object-Oriented Programming, Data Structures and Algorithms, REST APIs*

**Tools / Infrastructure:** *Git, Visual Studio, Windows/Linux, Agile (Scrum/Kanban)*

**Artificial Intelligence:** *LLM Integration, Agentic Workflows, Machine Learning (Neural Networks, SVM)*

## Experience

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### Graduate Research Assistant, Washington State University, Pullman, WA

- Engineered an Agentic AI workflow using the Gemini CLI to automate the detection and classification of Gang of Four (GoF) design patterns across large-scale Java open-source repositories.
- Validated system performance by benchmarking the novel LLM workflow against existing static analysis algorithms (Similarity Scoring, GEML), optimizing the pipeline for accuracy and reliability in developer environments

## Projects

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### AI-Powered Document Processor, Capstone Project | *Python, Agile Development, Sprint/Scrum, LLM*

- Developed an AI-powered document processing system leveraging large language models to automate data extraction from handwritten fuel transaction records
- Worked with a development team utilizing Agile methodologies, implementing Kanban workflows and two-week Sprint/Scrum cycles to deliver incremental product releases in line with stakeholder requirements and project expectations

### Astronomical Image Super Resolution Model, Data Science Project | *Python, CNN, PyTorch, Scikit-Learn*

- Developed a CNN super-resolution model based on EDSR to upscale low resolution galaxy images from 64x64 to 256x256 using PyTorch
- Built end-to-end machine learning pipeline including data acquisition through NASA's SkyView API, logarithmic normalization, and background substitution to preparing imagery for model training
- Validated upscaling by training a Random Forest classifier on galaxy morphology using the Galaxy Zoo 2 dataset, achieving up to 93% accuracy