

# KYLE WILSON

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<https://github.com/kywi4190/Projects>

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## TECHNICAL SKILLS

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- **Programming Languages:** Python, C, C#, Java, SQL, R, HLSL, HTML
- **Frameworks & Tools:** PyTorch, OpenAI Gymnasium, Pandas, NumPy, Unity
- **Technologies:** Git, Docker, Linux, Deep Learning, Reinforcement Learning, Classification Model, OpenAI Agentic API

## PROJECTS

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- **Prompt to Math Visualization Teacher using Agentic AI (Python):** Locally hosted website accepts user prompt to automatically generate a 25-45 second 3Blue1Brown style math visualization and education video with a voice-over using agentic AI. Initial generator, critic, and error catcher uses a multistep API call loop to minimize error and maximize success.
- **Deep Learning Handwritten Digit Classifier (C#):** Custom coded backpropagation uses deep learning to classify pictures of handwritten digits (0-9) from the MNIST dataset. Represents digit features in latent space to predict with 95% accuracy.
- **Volumetric Clouds (HLSL):** Compute shader renders clouds using ray-marched Rayleigh scattering and Worley noise.
- **Procedural Tree Generation (C#):** Leverages Lindenmayer systems to procedurally generate different species of trees.

## EXPERIENCE

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| <b>Software Development Intern</b> , Alphinat, Montreal   | <b>Summer, 2024</b> |
| <ul style="list-style-type: none"><li>• Added features, bug fixed, and optimized the code base of a low-code platform product</li><li>• Implemented and tested CRUD operations using the .NET Framework to interact with a web API</li><li>• Participated in weekly progress meetings about direction and pace of product development</li></ul> |                     |
| <b>Alternative Investments Summer Intern</b> , Ninepoint Partners, Toronto  | <b>Summer, 2023</b> |
| <ul style="list-style-type: none"><li>• Created slide decks of our investment strategies to pitch for prospective clients</li><li>• Researched potential investment sub-advisors and participated in due diligence meetings</li></ul>   |                     |
| <b>Wealth Management Summer Intern</b> , ScotiaMcLeod Rideau Wealth Group, Ottawa   | <b>Summer, 2022</b> |
| <ul style="list-style-type: none"><li>• Worked alongside client advisor and Managing Partner of wealth management practice</li><li>• Grew podcast and social media marketing initiative</li><li>• Sat in on client update and new prospect meetings</li></ul>   |                     |
| <b>Private Equity Analyst Summer Intern</b> , 1251 Capital Group, Ottawa  | <b>Summer, 2022</b> |
| <ul style="list-style-type: none"><li>• Constructed public company valuation analysis</li><li>• Built simplified minority leveraged recapitalization model in Excel from scratch</li><li>• Sat in on deal negotiations with lawyers and business executives for live deal</li></ul>   |                     |
| <b>Program Participant</b> , SHAD Canada, Ottawa  | <b>Summer, 2021</b> |
| <ul style="list-style-type: none"><li>• Chosen for prestigious STEM-entrepreneurship program run by 19 universities across Canada</li></ul>   |                     |

## EDUCATION

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| <b>Bachelor of Science in Computer Science, Applied Math</b> , University of Colorado Boulder, Boulder, CO   | <b>2023-Present</b> |
| <ul style="list-style-type: none"><li>• Current GPA: 3.87</li><li>• <b>Relevant Courses:</b> Data Science, Linear Algebra, Algorithms, Software Development Tools, Data Structures</li><li>• Tau Beta Pi – National engineering honor society, invite only for top eighth GPA in Engineering</li><li>• Sigma Nu Fraternity – Ethical leadership development, personal growth and community service</li><li>• Study Abroad: UC3M, Madrid (2025)</li></ul> |                     |
| <b>Bachelor of Science in Finance</b> , Babson College, Wellesley, MA  | <b>2022–2023</b>    |
| <ul style="list-style-type: none"><li>• Babson Analyst Initiative (2022) – highly selective equity research and stock pitching program</li></ul>   |                     |

## ADDITIONAL INFORMATION

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- Dual U.S. and Canadian Citizen
- Disciplined and accomplished athlete with over a decade of experience in teamwork, leadership, and thriving under stress
  - National Collegiate Rugby, National Champions – played wing on the starting lineup for Babson College (2023)
  - Undefeated USA Amateur Boxer
- **Further Project/Role Interests:** PPO, RAG, Diffusion, Continual Learning, Liquid Neural Networks, Auto-Encoding