Dimitri Chrysafis

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Hello! I am Dimitri Chrysafis, an incoming freshman at University of Madison, majoring in Computer Science. In high school, I took as many computer science classes as I could, from four different community colleges and universities. Nowadays, you can find me working on various projects involving computer vision and computer graphics.

Education

University of Wisconsin-Madison August 2025-May 2028
- Incoming freshman. Pursuing a Bachelor of Science (B.S.) in Computer Science and Engineering.

Irvine Valley College (Non-degree-seeking) GPA 3.89/4.0
- Relevant Coursework: Computer Discrete Mathematics (I, II), Calculus III (Multivariable), Differential Equations, C Programming, Python, Java

University of California, Irvine (Non-degree-seeking) GPA: 3.9/4.0
- Relevant Coursework: Intro to Programming for Numerical Methods, Intro to Programming for Data Science, Intro to Linear Algebra

Mission College (Non-degree-seeking) GPA: 4.0/4.0
- Relevant Coursework: Database Systems, Calculus I, Introduction to Statistics, Introduction to Biology

Brigham Young University (Non-degree-seeking) GPA: 4.0/4.0
- Relevant Coursework: Waves, Optics, and Thermodynamics, Newtonian Mechanics, Electricity and Magnetism, Calculus II

Projects

- **Fourier Drawing Machine**: Developed a visualization tool using Fourier series to explore signal processing concepts. Visualization available https://github.com/DimitriChrysafis/FourierDrawer.
- **Web-Based Fractals**: Implemented fractals and publishing in-depth explanations involving three different fractals. Demo and explanation: https://dimitrichrysafis.github.io/#post/post6.md.
- **Set Solver**: Made a program using image processing techniques to identify set cards in an image and classify them to the 81 fields of set cards; used machine learning to classify the cards. Code available at https://github.com/DimitriChrysafis/SetSolved.
- **Fluid Simulator**: Engineered a cutting-edge PIC/FLIP fluid simulation framework to replicate realistic fluid dynamics, delving into computational physics and web-based graphics technologies. Code available at https://github.com/DimitriChrysafis/Fluid-Simulator.
- **Physics Engine**: Used Verlet integration and other integration methods for smooth animations to simulate particle-based physics problems. It was also used by me to generate mosaic animations. Demo and explanation available https://dimitrichrysafis.github.io/#post/post7.md.
- **Sphere Packing**: Developed a tool to render 3D-Shapes using sphere packing. This ultimately boiled down to solving a constrained optimization problem. A written explanation available at https://dimitrichrysafis.github.io/#post/post8.md and my code can be found at https://github.com/DimitriChrysafis/SpherePacker?tab=readme-ov-file.

Skills and Interests

- Proficient in: C++ (5 years), Python (4 years), Latex (4 years), SQL (2 years)
- Favorite tools: PyTorch, Tinygrad
- Hobbies: Calisthenics, Squash, Running