Mark Winter

Seattle, Washington | 646-430-1802 | marknwinter01@gmail.com | linkedin.com/in/mark-winter |

EDUCATION

University of St. Andrews | Master of Arts (Honours) in Mathematics | *Scotland, UK*   *Sep 2019 - Jun 2024*
- **Dissertation**: A Walk along a Space-Filling Curve: Generating, Analysing, and Modeling Space-Filling Curves
- **Relevant Coursework**: Computational Numerical Analysis, Number Theory, Game Theory, Finite Mathematics, Topology, Real and Abstract Analysis

WORK EXPERIENCE

Software Developer | Skyscraper Foundry LLC. | *Remote; New York City, NY*   *May 2022 - May 2024*
- Developed both front- and back-end for an AI-assisted predictive planning tool using PyTorch and JavaScript to suggest optimizations to property portfolios for global skyscraper developers.
- Analysed and compiled zoning data covering NYC's 120,000 zoning plots using R to present synthesis for architectural clients.
- Created and delivered detailed PowerPoint presentations and summary documents for clients of all levels.

Bartender | The Road Hole Bar at the Old Course Hotel | *Scotland, St. Andrews*   *May 2021 - Sep 2021*
- Provided friendly customer service through the unique challenge of the 2022 British Open.
- Implemented alcohol-based solutions to customer needs by synthesizing unique taste profiles.
- Maintained a working hotel bar, managing stock and cleanliness to with internal and external regulations.
- Managed Point-of-Sale system and coordinated drinks service beyond the bar throughout the hotel.

Intern | M. Arch Architects | *New York City, NY*   *Jun 2019 - Aug 2019*
- Worked as a back-end software developer the small architecture firm M. Arch Architects to assist in the development of Zoner, the revolutionary new zoning application.
- Programmed and refined throughout the entire development cycle using Ruby on Rails.
- Gathered, parsed, and interpreted both public and private databases for information on over one hundred thousand zoning plots to build and inform the application.

PROJECT EXPERIENCE

Fishyphus of the Deep | Sprodsoft   *January 2023 - Present*

Expansion of Ludum Dare Game Jam 52 project. Worked as a full-stack developer on a team of 3 to create a three-dimensional physics-based golf-like collectathon.
- Learned and implemented tools such as Unity, Blender, and FLStudio, delivering high quality code to strict deadlines created to facilitate ongoing development.
- Identified interesting design concepts to create, iterate and polish an extensive game world informed by user feedback and game balance testing.

Box of Squingus | Sprodsoft   *October 2023*

72-hour Ludum Dare Game Jam project. Worked as a full-stack developer on a team of 3 to create an innovative cooperative platformer game.
- Delivered back-end code, front-end game design, and art to rapidly assemble a platformer game, scoring 16th for innovation against over 1000 submissions.
- Led the rapid transition from Unity into Godot to accommodate changing project needs.
- Developed the unique control system which hugely influenced the final appearance of the game.

Embedding Sustainability St. Andrews   *May 2023 - Sep 2023*

Developed a web application focused on educating students about sustainability with the Summer Team Enterprise Programme. Worked as lead software developer on a team of 5.
- Spearheaded the rapid assembly of a complete web application using Javascript within a limited time frame alongside a team of both students and staff while attending weekly skill workshops.
- Prioritized the importance of portability to enable the forward-looking use of the product on many platforms.

SKILLS

Programming : Proficient in C#, Python, Ruby, C/C++, Java. Experience with Go, Haskell, Rust, Typescript.
Development Tools : Proficient with Git, Ruby on Rails, Godot, Unity, Agile development. Experience with Docker.
Web Development : Proficient in HTML, CSS, SQL, JavaScript. Experience with React, PHP.
Data Science : Proficient with NumPy, pandas, R, SciPy. Experience with PyTorch.
Other : Proficient with Blender, FLStudio. Proficent in euphonium, trumpet, trombone.
Languages : Fluent in English and Albanian. Proficient in Mandarin Chinese