Angelo B. Marney   +1 (361) 331-3085   abmarnie9@gmail.com   https://github.com/abmarnie

Education

Virginia Tech. . . . .   Blacksburg, VA
30 graduate level credit hours. 3.37 GPA.   *Jan 2017 - May 2020.*
Texas A&M University-Corpus Christi . . . .   Corpus Christi, TX.
BS in Mathematics, minor in Geology. 3.95 GPA.   *May 2012 - Dec 2016.*

Professional Experience

Freelance Software Developer. November 2020 to Current.
- Shipping "Arctic Eggs" in Q2 2024 with over 1.5 million Twitter views, over 5000 Steam wishlists, and coverage in Rock Paper Shotgun and Yahoo News Japan media outlets.
- Maintain "Game Project Architecture and Organization Advice for Godot 4.0" (70+ stars), contribute to "GodotGame" (140+ stars), and other projects, using .NET, C#, Python, Blender, Godot, and Unity.

Research Engineer for **U.S. Army Corps of Engineers**, in Vicksburg, MS. May 2018 to January 2020.
- Benchmark, test, and document the "Adaptive Hydraulics Model System" for use on Cray XC40 systems; using C, CMake, ParaView, Bash, NetCDF, (Red Hat) Linux, SVN, BitBucket, Excel, LaTeX.
- Develop novel data-driven hydrology models for improved runtime engineering applications; using Python (Anaconda, Jupyter Notebooks, NumPy, SciPy, Matplotlib, Pandas), SQL, Docker, MacOS, GitLab.

Teaching Assistant for **Virginia Tech Math Department**, in Blacksburg, VA. January 2017 to May 2020.
- Lead 800+ students over 3 semesters in Excel & Mathematica based labs for Business Calculus I & II.
- Develop curriculum for 22 lab assignments in collaboration with other staff and professors.

Numerous jobs at **Texas A&M University-Corpus Christi**:
- **Math Tutor** to over 30 students at Center for Academic Student Achievement (5 months).
- **Academic Success Coach** to around 20 students at Center for Academic Student Achievement (17 months).
- **Undergraduate Researcher** in numerical linear algebra for Dr. Pablo Tarazaga (12 months).
- **Undergraduate Lab Assistant** in hydrology for Dr. Dorina Murgulet (2 months).

Projects

Software & Game Development:
- **Tech Lead** of team of 4 for "Rabbit Grab" (source available); made in 7 days for Easter Jam 2024.
- **Tech Lead** of team of 4 for "Dolphin Forces" (source available); made in 48 hours for Global Game Jam 2024.
- **Programmer** for "Arctic Eggs Demo"; made in 2 weeks for Bigmode Game Jam 2023.
- **Tech Lead** of team of 7 for "Beebo Attempt's Magic"; made in 48 hours for GMTK 2022 Game Jam.
- Currently developing Unity (and Godot) plugin "Lightweight (Batch) Icon Generator".
- Technical document for team members "Git and GitHub for Unity Game Development: A Beginner's Guide".

Applied Mathematics, Statistics, & Scientific Computing:
- Team data science and simulations project (using Python, MATLAB, Mathematica) for *2017 Industrial Mathematical and Statistical Modelling Graduate Student Workshop*, resulting in report and presentation "Short-term Forecasting of the Near-shore".
- Engineering simulations project (using MATLAB) for *Multicultural Academic Opportunities Program (Virginia Tech)*, resulting in presentation "Semi-analytical Finite Element Methods for Guided Wave Propagation". Lead to future work on Finite Element Methods in both MATLAB and Julia.
- NSF funded research project (using MATLAB, Mathematica) for the *Louis-Stokes Alliance for Minority Participation Program*, resulting in a poster presentation "An Iterative Algorithm for Computing the Dominant Eigenpair of an Elliptic Matrix".
- Graduate matrix theory class report (using MATLAB) "The quadratic eigenvalue problem".
- Graduate numerical analysis class report (using MATLAB) "Monte Carlo Methods for the Busy Mathematician".
- Undergraduate geomorphology class project (using Agisoft MetaShape, QGIS, Excel) "Analysis of small-scale sediment changes to an underdeveloped sand dune".

Skills & Interests

Programming Languages: C#, F#, C, C++, MATLAB, Python, JavaScript, TypeScript, Julia, Futhark
Tech: .NET, Entity Framework, Microsoft SQL Server, Anaconda, Jupyter Notebooks, Docker, Visual Studio, VSCode, CMake, Git, SVN, GitHub, BitBucket, GitLab, Unity, Godot, Blender, Wolfram Mathematica, Agisoft Metashape, Gmesh, FreeCAD, ParaView, QGIS, Jira, Notion, Canvas LMS, NetCDF, XML, JSON, Jekyll, LaTeX, Excel, Google Sheets, Bash, PowerShell, HTML, CSS
Hobbies: Math, Reading, Fishing, Cycling