Peter Francis

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Bloomington, IN, United States

SKILLS AND EXPERTISE

- **Programming Languages**
  + $\gtrsim$ 4 years experience:
    Bash, C#, Java, JavaScript, Lisp(s), Lua, Python
  + $\lesssim$ 4 years experience:
    Assembly, C, C++, Go, Haskell, Rust
- **Game Development**
  + Gameplay scripting
  + Game design concepts, design documents
  + Shaders and shader-graphs, Cg/HLSL/GLSL
  + Unity (C#, scripting, shaders)
  + Unreal Engine 4 (C++, scripting, blueprints, materials, set dressing)
  + Godot (GDScript, C#, scripting, shaders)
- **Software Development & Production**
  + Agile, Scrum, JIRA
  + Version control, Git

- **Artificial Intelligence & Computing**
  + Formal logic, automata theory
  + Agent scripting, steering, path-finding
  + Concept experience: Bayesian networks, behavior trees, blackboard systems, decision trees, heuristics, ML techniques, neural networks, state machines
- **Server Administration**
  + Software experience: POSIX, Shell, SSH, FTP, Apache, MariaDB, MySQL, Docker, web servers, game servers
- **Digital Content Creation**
  + Web design (HTML, CSS, SCSS), Blender, LaTeX

PROFESSIONAL EXPERIENCE

- **Game Programmer — *OddestSea***

  oddestsea.com | June 2018 - April 2020
  + Created game code, visuals, design, documentation (C#, Cg/HLSL/GLSL, Unity)
  + Researched and developed solutions for complex tasks, such as a water shader and buoyancy system
  + Authored original design and managed team formation
- **Undergraduate Instructor — Introduction to Artificial Intelligence**

  Indiana University, CSCI B351 | August 2018 - May 2019
- **Undergraduate Instructor — Introduction to Game Development**

  Indiana University, CSCI B453 | January - May 2020
  + Created and organized course structure, assignments, and documentation
  + Taught and assisted students in coursework
- **Game Development Camp Instructor**

  Indiana University, Media School Game Camp | Summer 2017, 2018, 2019
  + Managed and organized students in week long camps
  + Instructed and assisted students studying game development (Unity, UE4, Construct, Godot)

- **Game Programmer — *The Astro Parcel Service***

  vixensludum.com | May 2019 - April 2020
  + Contracted to assist with technical development of *The Astro Parcel Service*
  + Responsible for developing AI of game's NPC adversary
- **Custom OCR Tool Development Consultant**

  Indiana University, Media School Development Project |

  May - August 2019
  + Contracted to develop tool to parse and record data from a game for use in a game statistics and analysis class
  + Developed an OCR toola
- **UI Development Consultant**

  Indiana University, SICE Research / Development Project |

  May - August 2018
  + Contracted to develop a User Interface for a game research / development project (C#, Unity)

EDUCATION

- **B.A. Computer Science & B.S. Game Design**

  Indiana University, Bloomington, IN |

  August 2016 - August 2020
  + Concentration in Artificial Intelligence

PERSONAL AND VOLUNTEER EXPERIENCE

- **Gamedev@IU - Officer**

  May 2018 - May 2019, gdiu.org
  + Assisted running student-led game development club
- **Personal Game Development & Programming projects**

  2011 - Present