Michael Kirk

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EDUCATION

University of California, Irvine   **Irvine, CA**
Bachelor of Science in Computer Game Science   June 2020
- GPA: 3.61 / 4.00
- Relevant Coursework: Design and Analysis of Algorithms, Data Structure Implementation and Analysis, Programming with Software Libraries | OOP, Introduction to Data Management | SQL

PROJECTS

Alone Together
- Collaborated with a group of 6 developers to create a 3-D co-op action game using C# and Unity with an in-depth system architecture and emphasis on tool creation
- Specialized in character combat system and tools, interactable environment objects and level optimizations
- Conducted weekly sprints, in agile development setting, with bi-weekly code/design review, bug triaging and consistent rapid prototyping resulting in accelerated development of 25% (additional 4 features per week)

Foodr
- Conceptualized a RESTful web application that recommends local restaurants based on user preset food preferences
- Integrated Google APIs such as geolocation and places, to obtain JSON scripts for information parsing
- Established an efficient parsing function that decreased search time by 20% using sorted restaurant ranking statistics

A.R.M
- Developed a python search engine that displays accurate URLs given a user entered query
- Implemented a term-frequency inverse-document-frequency weighting system to provide accurate results from thousands of URLs parsed data
- Improved database allocation space by 10% (>10,000 words) by utilizing natural language toolkit (NLTK) text processing

Robo Cat
- Overhauled a client-server multiplayer video game with local movement prediction for high latency clients and additional IO stream capabilities such as player power-ups
- Consolidated new features into existing code base of 1000+ lines of C socket programming

Wumpus World AI
- Established a knowledge-based, artificially intelligent agent in C++
- Trained agent through perceptions in environment to locate gold within a danger prone 2-dimensional map
- Programmed intelligence to take safe route 100% of its attempts by integrating a form of depth first search (DFS) that tracks statistical probabilities of each board space

ADDITIONAL EXPERIENCE

Information and Computer Science Lab Tutor   January 2019 – March 2019
- Instructed introductory Python programming lab session with 40 students
- Guided students in common Python coding concepts through short lessons and debugging practices

TECHNICAL SKILLS
- Languages: Python, C++, C#, SQL, JavaScript, HTML/CSS
- Frameworks and Libraries: React, Unity, Google API, Natural Language Toolkit
- Tools: Windows, Visual Studio, Git, GitHub, Unity Engine

LEADERSHIP

Association for Computing Machinery (Board Member)   September 2017 – June 2020
- Organize club meetings/events through gathering club logistics, internal/external outreach, and event planning
- Held weekly meetings that encompass competitive programming/data structure and algorithm discussions and supply club members with sufficient coding challenges