Michael Kirk

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Education

BSc in Computer Game Science, GPA: 3.61 / 4.00 **Graduated June 2020**

University of California Irvine Irvine, CA

- Relevant Coursework: Design and Analysis of Algorithms, Data Structure Implementation and Analysis, Programming with Software Libraries (OOP), Introduction to Data Management (SQL)

Skills

- Languages: Python, C++, C#, SQL, JavaScript, HTML, CSS
- Frameworks and Libraries: React, Unity, Natural Language Toolkit
- Tools: Visual Studio, Git, Unity Engine

Projects

Foodr – Python, HTML, Bootstrap, Geolocation API, Places API, Git https://github.com/Michael-C-Kirk/Foodr

- Conceptualized a RESTful web application that tailors restaurant recommendations for each user through multilevel decision tree classification
- Integrated Google APIs such as geolocation and places to build a database with hundreds of local restaurants
- Implemented an efficient parsing function using sorted restaurant ranking statistics, decreasing search time by 20%

A.R.M – Python, NLTK (Natural Language Toolkit), Git

- Developed a search engine through the implementation of a tf-idf weighting system, sourcing from tens of thousands of lines of URL-parsed data
- Consolidated inverse index allocation space by over 10,000 words by utilizing NLTK word processing
- Achieved 100% accurate search engine results displayed within seconds of user-defined queries

Alone Together – C#, Unity, Cinemachine https://supriseorb.itch.io/alone-together

- Collaborated with a group of 6 developers to create a 3-D co-op action game with in-depth system architecture, including procedural map generation, game state manager, looting system, and combat system
- Developed character combat system with over 10 interchangeable abilities, interactable environment objects, and level optimizations through mesh baking, resulting in a reduced graphical load
- Conducted weekly sprints with bi-weekly code/design reviews, bug triaging, and rapid prototyping resulting in an accelerated development cycle of 25% additional features per week

Robo Cat – C, Git

- Overhauled 3 IO stream capabilities for a client-server multiplayer video game including local movement prediction for high-latency clients
- Introduced new features into a code base of 1000+ lines of C socket programming, including updated movement directions, player speed power-ups, and character shrink ability, integrating seamlessly with the game's input and output state managers

Experience

Information and Computer Science Lab Tutor January 2019 – March 2019

- Supervised introductory Python programming lab sessions for 40 students on a bi-weekly basis
- Guided up to 10 students per session in common Python coding concepts through short lessons and debugging practices

Leadership

Association for Computing Machinery (Board Member) September 2017 – June 2020

- Organized bi-weekly club meetings to gather club logistics, conduct internal/external outreach, and plan events
- Held discussions encompassing competitive programming and data structures and algorithms and supplied club members with 10 new coding challenges per week