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Kai Kuehner
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EXPERIENCE

Princeton Neuroscience Institute- Developer (TypeScript, JavaScript, Python) 10/2019 – 10/2024

- Identified and collected metrics for evaluating user performance
 - Developed algorithm for comparing neurons using F-score based on volume differences
 - Interfaced with ChunkedGraph and CloudVolume backends to request and process data
 - Used Google Sheets API to identify new user data rows and fill in processed scores
- Created features for FlyWire online neuron proofreading platform
 - Developed matching algorithm for weighted neuron connections flowchart
 - Implemented frontend and backend for daily user performance leaderboard
 - Consolidated many simultaneous user queries into cached periodic global request
 - Designed and developed chat system featuring user messaging and chatbot
 - Handled disconnecting and duplicate web socket connections to ensure single connection per user
 - Used Koa.js to create small web services running on Google Kubernetes Engine
 - Created modular dynamically-updating frontend components with Vue.js built on Neuroglancer
- Developed workflow and features for AI-driven online citizen science platform Pyr
 - Consulted with users to identify workflow pain points and streamline common usage patterns
 - Rewrote and added features to virtual avatar character designer
 - Implemented layering and masking systems to prevent visual overlap of worn items

CMU Human-Computer Interaction Institute- Researcher (C#, Unity) 5/2018 – 8/2018

- Designed and developed multiple VR room-scale experiences
- Utilized HTC Vive, Intel RealSense, and Leap Motion to create interactions

Carnegie Mellon University- Teaching Assistant (Ethics & Policy Issues in Computing) 1/2018 – 5/2018

- Graded papers, gave feedback on homework, assisted students

Congregation Beit Simchat Torah- Technology Intern (C#, WinForms, SQL) 5/2017 – 8/2017

- Redesigned processes, configured and deployed DokuWiki, provided general technical assistance, created application to generate Excel files from text

Escape the Room NYC- Developer (C#, Unity, SQL, HTML, Javascript) 12/2015 – 7/2017

- Created VR motion-tracked puzzle room experience using Oculus Rift
- Implemented puzzle application in Unity integrated with web interface

Crestron- Programming Tools Intern (C#, WinForms, ASP.NET MVC, SQL) 6/2016 – 8/2016

- Created business applications to automate programming Crestron devices

BrightLogic- Intern (C#, Unity) 6/2015 – 7/2015

- Developed games and licensing application for interactive LED floor system

EDUCATION

Carnegie Mellon University- B.S. in Computer Science, Minor in Game Design (QPA: 3.48) 2015 – 2019

Relevant courses and extracurriculars:

- 15-462 Computer Graphics: rendering, geometry, animation using C++
- 53-451 Research Issues in Game Development: VR game design and programming
- 15-466 Computer Game Programming: creating a networked C++ game with a team
- Global Game Jam 2018: Led a team to create a themed game in 48 hours

Bergen County Academies- Academy for Technology and Computer Science 2011 – 2015

Relevant courses: Data Structures, C Programming, Linux Shell Programming

PERSONAL WEBSITE/PORTFOLIO: <http://kaikuehner.com>

- Developed games using Unity, Game Maker, Python with Pygame, and HTML5 with Javascript
- Utilized Git and Github for many projects, both individual and collaborative
- Participated in game jams, designing & implementing games fitting a given theme in a short time
- Designed and coded web pages using HTML and CSS

SKILLS

C#, Python, JavaScript, TypeScript, HTML, CSS, Java, C++, C, Unity, SQL, Git, SVN, Koa.js, Vue.js, Google Cloud Platform (GCP), Google Kubernetes Engine (GKE), Github Actions