Kevin Barr
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TECHNICAL PROFILE

Senior C# Unity Games Developer / Senior C# Unity Simulation Engineer

- 9+ years of industrial experience ranging from developing business/industrial simulations to creating video games.
- Technical Lead experience of a team; designing, managing, and implementing projects from concept to delivery leading a small development team.
- Experienced with client relations, presenting/pitching to VIP or senior / chief management, managing a team, and introducing and utilising technical and management tools for teams (Azure DevOps, Gitlab / Github, JIRA + Confluence).

SKILLS

Languages: C# (9+ years), C++ (4 years), GDScript (6 months)
Engines / Frameworks: Unity3D (9+ years), Godot (6 months)
Hardware: Oculus Rift (VR) (1 year), Microsoft HoloLens (XR) (1 year), iOS AR via Unity (1 year)
Proj Mgmt / VC: Git (9+ years), Azure DevOps/TFS (7 years), Trello (9+ years), JIRA + Confluence (5 years)
Other Exp.: Unity Services (IAP, Analytics) (1 year), Firebase Cloud/Services. (1 year), RESTful APIs (1 year), .NET Core (1 year)

WORK HISTORY

Senior Unity Engineer (Unity C#) - GN3RA, Remote, UK-based
February 2023 - January 2024

- Implemented core systems with cross-platform compatibility (PC / Desktop, iOS)
- Designed and developed as part of a team, the core content pipeline and data structures for materials, models, textures that allows for modification at runtime.
- Primary developer of iOS version of the application, including AR body tracking, pose matching with custom models and implementation of lightweight versions of main application content for iOS platform.
- Hooked into Firebase and Unity services via RESTful implementation.

Technical Lead & Senior Unity Developer (Digitalisation Specialist) (Unity C#) – Siemens Gamesa Renewable Energy, Hull UK
June 2019 – February 2023

- Developed and managed a user-focused simulation software to digitise industrial manufacturing processes. This included:
    - scheduling and planning timeline with forward, rewind, skip and tempo controls. Including visuals of objects moving to their matched scheduling. The end-user can define these objects using ‘nodes’ of behaviour, for example how objects are constructed by a developer in Unity.
    - Free-form simulation allowing hypothetical scenarios using any factory model data to allow for futureproofing and situational planning.
    - Data-driven approach for visualisation supported by XML. Allows for all custom user-defined data to be serialised for later use / sharing.

    - Supporting systems: different camera modes (FPS, RTS, in-the-seat operator view for blind-spots), contextual radial menu with animations, raycast-based measurement systems for accuracy and precision (confirmed by real-world measurements).
- My role included:
    - Managing a team of developers at the technical and project management level using Azure DevOps (VC: Git via DevOps)
    - Designing and concepting the application from initial stages and approving further designs from team as development progressed
    - Technical development / implementation in Unity C#.
    - Client relations including teaching workshops, regular progress meetings, demonstrations to other interested parties.
    - Managed client's expectations and filtered requirements.

Unity C# Developer – The Logistics Institute, UoHull, Hull UK
August 2015 – May 2019

- Developed a collision-risk simulation for a client using Unity C#:
    - Worked with initiative with one other team member without oversight
    - As a two-man team, developed a collision-risk assessment system using shaders to colour grade potential risks to client's product and manpower
    - Developed other systems such as camera controls, contextual menus based on object functionality, many object controllers to define individual functionality (crane, vehicles, personnel, etc).
- Experience with Microsoft HoloLens technology to create pathfinding and task tracking prototypes for factory warehouse workers
    - Pathfinding routes used to calculate optimal route to collect items / check-out
    - Obstacle detection once aligned by a marker.
    - Kept track of items picked and displayed on a dynamic HUD designed to avoid motion sickness.
- Learned languages on demand to support rapid prototyping (Go, PROLOG, JavaScript) based on demand from clients.

VR / AR Technology (Unity C#) Research Intern – The Digital Centre, UoHull, Hull UK
June 2015 – August 2015

EDUCATION

University of Hull (2017 – 2019: Extended, then Withdrew for High-Value Job)
MSc Computer Science for Games Development - Expected 2:1

- Simulation and AI (Physics, Game AI)
- Real-Time Graphics: DirectX 11 Implementation (HLSL, DirectX)
- Advanced Rendering (Raytracing) and Virtual Environments (Mixed Reality)
- Games Architecture and Concurrency (C++ Threading, Networking, ECS Engine)

University of Hull (2013 – 2017)
BSc Computer Science with Games Development (with Foundation Year) - First Class

References - Available on request.