# [Frank H. McPherson IV](http://www.linkedin.com/in/fhmiv/)

# Profile

Technical leader and software engineer specializing in scalable data processing systems, serious games, geospatial data & applications, and modeling, simulation & training

# Experience

## 2019 to present

## Senior Software Engineer [Apple](http://www.apple.com/), Cupertino, CA

* Apple Media Products Digital Supply Chain Engineering (AMP DSCE), Content Protection Team
* Maintain & operate AMP’s legacy content protection apps & services
* Design and develop modern, containerized content protection services using attribute-based access controls, microservices, and containerized deployments

## 2013 to 2019

## Senior Software Engineer [Apple](http://www.apple.com), Cupertino, CA

* Maps Digital Supply Chain Engineering, Points of Interest (POI) Team
* Daily POI Data Updates from external & internal providers
* Provide POI integration for tentpole client & services features, such as Transit, Venues, and Apple Card
* POI integration for Apple-owned Maps Data Initiative that began roll-out in 2018

## 2001 - 2013

## Technical Director, [Janus Research Group](http://www.janusresearch.com/), Evans, GA

* Led development of Unity3D Virtual Environment Engine (UVEE), a serious game platform written in C# and Unity3D
  + Developed tooling and domain-specific language for instructors to produce course material
  + Managed teams that delivered thousands of hours of interactive training simulations, bringing in tens of millions of annual revenue
* Wrote [QTPlayback](http://web.archive.org/web/20210619104431/http://wiki.unity3d.com/index.php?title=QTPlayback), a widely-used Unity3D plug-in to play QuickTime movies on any texture in a scene
* Integrated hardware fingerprint scanner with Unity3D serious game
* Managed team providing data engineering support to a DARPA machine vision project, Mind’s Eye
* Led a team of software developers to develop NPST, a terrain-based communications coverage planner written in Java and Java3D
* Developed *netflows*, a turnkey network performance monitoring system using LIBPCAP, a Postgresql data store, and a Java front-end

## 2000 - 2001

## Lead Software Engineer, AdEvia Ltd., London, United Kingdom

* Developed network management and operations support software for venture-funded pan-European broadband aggregation start-up

## Education

### Bachelor of Science, Computer Science, Virginia Tech

## Key Skills

Java/Scala, Python, Unity 3D, C#, C, Cocoa, JavaScript, SQL, Spark, MapReduce, Git, Linux, Cassandra, Kafka, Redis