

## Work Experience

### **Guaranteed Rate – Principal Software Engineer**

12/2021 – Present

**As the Principal Engineer of the Product Engineering organization, I take ownership of development and architecture of many enterprise-wide apps and microservices. At my current position, I am:**

Writing multitenant, enterprise-scoped applications with configurable vendor integrations, with or without support of a team

Directing organizational architecture for new applications and services within the Product Engineering organization geared towards reducing enterprise-wide complexity and cost

Established the enterprise architecture “RFC” (Request for comments) system that allowed enterprise standards to be discussed and reviewed by all engineers in the enterprise before adoption

Managing technical interactions between external vendors, development teams, and stakeholders

### **Rocket Mortgage – Software Engineer**

12/2018 – 11/2021

First to draw out the full architecture diagram of the Rocket Pro services, which exposed numerous issues and led to a streamlining of our systems.

Integrated legacy systems into Rocket Pro and vice versa.

Served as Tech Lead for early projects that laid the foundation for easy future additions.

Ideated, specced, wrote, tested, deployed, and integrated reusable libraries into downstream systems.

Mentored senior engineers in their use and modification.

Prototyped, refined, and finalized the CI/CD pipeline and server integrations for Rocket Professional.

Provided extensive code review feedback and mentoring during the entire development process.

Maintained extensive documentation, including but not limited to IDE setup processes for legacy systems, deployments, and major code updates.

Maintained an exceptionally high standard of communicating complex engineering information and processing it into easy-to-understand and non-intimidating bites for non-technical team members.

### **Clear Launch – Solution Architect**

8/2017 – 6/2018

Developing mobile, web, and eCommerce applications for clients including:

**Tiff’s Treats, Build-A-Sign, Precision Autonomy, WellAware, Broomly**

Translating customer/project requirements into discrete programming tasks

Supporting new projects by developing prototypes, mockups, and wireframes

Tech & languages included: C#, Unity, Azure, ASP.NET, MSSQL, Angular, MongoDB, Node.js

### **Redbird Flight Simulations – Senior Software Engineer**

1/2016 – 7/2017

Full Stack Development for Flight Simulator and Aircraft products

Product Installer Development using Advanced Installer

Continuous Integration Setup and Administration using Jenkins, GitLab, and AWS

#### **Architected Projects at Redbird Flight Simulations:**

**Satloc/AgNav Crop Duster Light Bars** (C#, C++/C, .NET, GDI+) – Crop duster lightbar app.

**Qualification Test Guide** (Elixir, Phoenix, C#, .NET, PostgreSQL, SimConnect) – EASA App.

**Guided Independent Flight Training Service** (C#, .NET, SimConnect) – Mission grading service.

**Navigator** (Elixir, Phoenix, C#, .NET, PostgreSQL, Sqlite, SimConnect) – Flight Sim Interface.

**Sidekick** (Java, Python, BLE, Phidgets) – Flight recorder.

### **Fair Trade Technologies – Chief Engineer**

7/2015 – Present

Providing all in-house software development and consultation services

## Work Experience Cont'd.

### **EWI Worldwide – Technology Developer**

6/2013 – 6/2015

Managing Development department after departure of previous Technical Director

#### **Notable Projects at EWI:**

**AT&T - Connected Car** (Unity Game, C#, .NET, WPF, Javascript, Azure)

**AT&T - Vehicle Lookup Tool** (C#, .NET, Objective C, Xamarin, iOS, Android, Azure)

**Pavilion Park - Kids Table** (C#, .NET, WPF, Azure)

**Kia - Driving Game** (C#, .NET, WPF, JavaScript, Azure)

### **Internal Drive Tech Camps – Multiple Positions**

7/2012 – 3/2013

Acted as **Curriculum Developer** for the company's Game Academy division

Acted as **Lead Instructor** for a team of 6 game development instructors at the Harvard Game Academy

### **Blackstone Academy Charter School – Contract Teacher**

3/2012 – 6/2012

Taught Chemistry, Physics, Biology, and Geology to students using improvised classroom games

### **38 Studios: Kingdoms of Amalur – Game Designer**

9/2010 – 2/2012

Product Owner for the BigWorld Server Scripting System and the UDK Client-Side Events System

Prototyped experimental game systems and scripted content for the game's Vertical Slice

### **BioWare: Star Wars: The Old Republic – Game Designer**

7/2009 - 7/2010

Scripted multiplayer content for a story-driven, Star Wars-based, Massively Multiplayer Online Game

Worked with engineering to prototype and revise features to the Companion Character System

Held workshops with internal and external design teams to teach advanced game systems

## Presentations & Speeches

### **Massachusetts Institute of Technology**

Causing Fear and Anxiety through Sound Design – MIT Museum

5/2011

Making Games with Quickness and Awesomeness – MIT Game Lab

4/2012

## Education

### **Master of Interactive Technology – Southern Methodist University**

5/2009

First SMU Guildhall graduate to publish research thesis

Created methodology to study emotional responses created by games

*Publication: Toprac, P. and Abdel-Meguid, A., Causing Fear and Anxiety through Sound Design in Video Games.*

*In M. Grimshaw (Ed.), Game Sound Technology and Player Interaction: Concepts and Developments*

### **Bachelor of Science in Business Management - Illinois State University**

12/2007

## Skills

**Languages & Frameworks:** C#, C++/C, .NET, AWS Infrastructure, Unity, Node.js, MongoDB, GDI+, Unreal Development Kit, Unreal Engine, Elixir, Erlang, Phoenix, COM, MVVM, MVC, PostgreSQL, MSSql, Sqlite, JavaScript, Java, Python, HTML/CSS, Xamarin, WPF, Lua, SourceSDK, HeroEngine, Radiant, Djinn

**Other:** Amazon Web Services, Microsoft Azure, Windows Installers, Flight Simulator Systems