# Thomas Payne

**Software Engineer** • tepayne97@gmail.com • 314-369-9608 • [linkedin.com/in/thomas-e-payne](linkedin.com/in/thomas-e-payne) • [itsthetombomb.github.io](itsthetombomb.github.io)
*Consumer-focused engineer passionate about building robust systems, cultivating high-performing teams, and advancing financial technology.*

## Experience

**SwissRe**, Application Engineer - Platform                                                                 *10/2023 - Present*
- Developed a data-driven underwriting tool leveraging Apache Kafka, MongoDB and Occurrent to enhance reinsurance submission, pricing, quoting, and claim evaluation processes.
- Designed and implemented Kotlin with Ktor microservice boilerplates with hexagonal architecture that supports event sourcing, robust error handling and functional programming practices with Arrow.
- Provided technical leadership by closely collaborating with business analysts and external stakeholders, refining feature lifecycles, adapting API contracts, and safeguarding overall system stability.
- Initiated and led the refactoring  of inter-service communication, transitioning to a CQRS-driven Redis  caching solution to mitigate data loss risks and improved data consistency.
- Enhanced observability and control by implementing monitoring, logging, and feature flagging with Prometheus, Loki, Grafana, and Flipt.
- Identified and eliminated performance bottlenecks through targeted optimizations, including aggregate query refinement, event-stream snapshotting, Kafka consumer group reconfigurations, and Kafka Stream aggregations.
- Develop an integration test suite that toggles between real services and mocks, improving CI pipeline runtime and supporting external environments to enhance production stability.

**Mythical Games**, Backend Software Engineer                                                             *01/2022 - 07/2023*
- Core contributor of SAGA, Mythical Games' EVM-compatible ERC20/ERC721 blockchain driven marketplace backend from inception to launch. (Third largest NFT blockchain by transaction volume)
- Maintain and improve SDKs and APIs that wrap blockchain smart contracts for use in NFL Rivals and Nitro Nation.
- Design and deliver scalable self healing idempotent Kotlin and Golang microservices that dictate on-chain functionality.
- Constructed a safe, iterative metadata sorting algorithm to improve search performance for Blankos Marketplace metadata.
- Extend chain execution and listening logic in Golang services for token mints, burns, and transfers using OpenZeppelin, Truffle, and Web3.js.
- Containerized services for Kubernetes, configured Helm charts, and developed GitHub Actions workflows to automate deployments on Google Cloud Platform.

**Northrop Grumman**, Junior Software Engineer                                                          *09/2019 – 12/2021*
- Full-stack, Agile development of data-driven a web application, leveraging a C# .NET and PostgreSQL backend with a React frontend.

**CU Boulder Integrated Teaching and Learning Lab**, Junior Front End Developer          *01/2018 – 01/2019*
**ANSYS**, Mechanical CAD Software Development Intern                                                    *05/2019 – 08/2019*
**Circadence Corporation**, Software Development Intern                                                     *05/2018 – 08/2018*

## Education

**University of Colorado Boulder, Boulder CO. 2019**
- BS Creative Technology and Design, Computer Science, Architecture minor

**Udemy Certifications**
- Design Microservices Architecture with Patterns and Principles
- Kubernetes and Docker The Container Masterclass
- Ethereum and Solidity, The Complete Developers Guide

## Entrepreneurial Initiatives

**ABA Pathway**, CTO                                                                                                      *08/2024 - Present*
- Build and distribute an IOS and Android application connecting Autism patients to Board Certified Behavior Analysts.
- Lead all project initiatives with a consumer-focused approach, defining and delivering requirements to the Flutter development team to ensure end-user-driven solutions.
- Architect and own HIPAA compliant AWS cloud infrastructure using ECS and Fargate, with Github Action CI/CD integrations.

**AMQAI**, Co-Founder                                                                                                    *08/2023 - 08/2024*
- SaaS product focusing on conversational AI technology to handle private data built on Spring boot, React, PGVector and OpenAI.