Brian Marco — Software Developer

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Programming Languages

Clojure, Clojurescript, Python, Javascript, Java, HTML, CSS, Objective-C, C, SQL, Scheme

Familiar Libraries

datomic, datascript, reframe, rum, posh, core.async, kabel, onyx, transducers

Additional Skills

Concurrency, CRDTs, User Interface Design, Linux Shell, emacs, vim, guix, git

Software Development Experience

Home Chart (2020 – 2022)

While helping my special needs nephew during the Covid-19 shutdown, I noticed the interface for his home chart was cumbersome. Rather than building a user interface from scratch I re-implemented the core features using Airtable. I also built a synchronization tool so that the data could be retained over time and possibly migrated to a more specialized tool in the future.

- Developed an Airtable synchronization tool by using Clojure

Datsys (2016 – 2019)

An open source system designed to develop seamless applications using a Datomic graph-database backend. Datsync is a sublibrary that handles the synchronization between the front and backend. Datview is a sublibrary that consists of a set of experiments attempting to provide automatic interactive data visualizations and common user interface elements using annotations rather than code.

- Worked with other open source software developers to build a framework for data synchronization and data representation
- Developed bridging code between Datascript (an in-memory database) and Datomic (a cloud scale datalog database) by using Clojure/Clojurescript
- Developed various user interface elements by using Clojure/Clojurescript
- Project page: `https://github.com/metasoarous/datsys`

Onyx Sim (2017 – 2018)

A visualization tool for running the Onyx Local Runtime. It was used to facilitate experiments with Datview's user interface techniques. Onyx is a cloud scale data-processing framework similar to Apache Spark that provides durable executions using graphs of idempotent functions.

- Developed a simulator for Onyx by using Clojure/Clojurescript
- Project page: `https://github.com/bamarco/onyx-sim`
- Demo: `https://mademonkey.com/onyx-sim`

Astroballs (2014 – 2015)

An educational interactive ebook about space. Traditional ebooks use fixed content. Interactive ebooks include game-like elements and interactive models.

- Worked with software developers, 3d graphics artists, and writers to develop an interactive ebook about space
- Developed a model of the solar system by using Unity engine
- Developed a flowing mosaic widget by using Javascript and CSS

Hatty Waiver Wire Guru (2010 – 2013)

A draft guide for fantasy football developed for iPhone and iPad. Although it could help you prepare ahead of a draft, it's main feature was the ability to use it on the fly during a draft when the draft didn't go to plan and users needed to adjust their picks on the fly.

- Worked on a team with an artist and sports analyst to develop a Fantasy Football Draft Guide for the iOS App Store by using Objective-C
- Designed a user interface optimized for quick reference

Icarus Studios (2007)

Icarus Studios produced the game "Fallen Earth" among other projects using the same game engine.

- Developed Non-Player Character (NPC) control algorithms by using Small

Education

Georgia Institute of Technology (2003 - 2007)

- Bachelor of Computer Science
- Certificate in Information Assurance (Computer Security)
- Minor in International Affairs (East Asian Economic Development model)

University of North Carolina (2009)

- Continuing education in data analysis (Word Sense Disambiguation, Gene Splice Detection) by using Python

Interests and Activities

Martial Arts (2004 – 2022)

- Started teaching Systema in 2017. Started training Systema in 2011.
- Studied various martial arts (Tae Kwon Do, Wu Shu, Jiu Jitsu, Aikido, Karate, Muay Thai)

Camp Flintlock (2000 – 2005)

- Taught 9-14 year olds various 18th century skills (fire building, throwing tomahawks, splitting wood, etc)
