

Thesis Portfolio

Redefining the Digital Storefront
(Technical Report)

**Amazon and Alibaba: How Cultural Misunderstandings
Precede Failure in International Markets**
(STS Research Paper)

An Undergraduate Thesis

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Bachelor of Science, School of Engineering

Nick Sarris
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Department of Computer Science

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SocioTechnical Synthesis

The two projects involved in this portfolio include a capstone project in which I designed and built the initial framework for an e-commerce platform modeled after Alibaba's platform in concept, as well as a research paper analyzing and discussing the reasoning behind the twin failures of Amazon and Alibaba. I was inspired to write about the two companies in question primarily due to the research I did when designing and building the e-commerce platform for my capstone. It was necessary to learn all that I could about the "competition", especially in how they manage individual aspects of their respective platforms and business.

With regard to my capstone project, I specifically decided to create an e-commerce website for a number of reasons, but primarily just because the subject has always been incredibly interesting to me. Throughout my time as an undergraduate at the university, I've personally developed and helped to market two cryptocurrencies that are both still active and being traded today (May 2020). The idea of e-commerce, in particular, is something that I'm passionate about and will work hard on to complete. In spite of the time spent working on the project over the past two semesters, however, I'm still going to need to take more time over the next few years to truly produce a build of the platform that'll be able to be launched and marketed as a startup.

The current iteration of the platform is built mainly with Javascript and Javascript frameworks. React.JS and Redux supply the frontend design, Express.JS and Node.JS host the backend, and MongoDB is used for the database architecture. Mongoose is used as the main form of communication between the backend server and the database. Overall, though, each of these frameworks work in sync with the rest to produce the platform.

With regard to my research paper, as mentioned, the decision to discuss Amazon and Alibaba came as I was researching the architecture for my capstone. Both Amazon and Alibaba each have very different platform frameworks altogether. Amazon is a retailer with a platform that lists specific pieces of inventory owned by the company, while Alibaba's platform is solely an online marketplace without any inventory whatsoever. All that the latter does primarily is connect buyers and sellers together. It seems clear that an architecture more similar to Alibaba's model will be much more successful as a startup.

When researching these concepts, however, it struck me that I've barely noticed a hint of Alibaba's presence in the United States, and similarly, after some research, Amazon barely has any presence in China. I decided that I wanted to figure out the reasoning behind such, especially when I learned that Amazon made the decision to pull out of China after fifteen years of operating losses.