Scrum Project Management: Effective Software Engineering with a Small
Team
(Technical Report)

The Growth of US Tech Startups in the Face of Software Corporations
(Sociotechnical Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

by

Jacob Lear

May 6, 2024

Contents

Preface

How have modern styles of software project management, such as Agile and Scrum, changed the software industry landscape? Modern methodologies with a focus on quicker production and feedback have impacted tech businesses across the country.

RevArt, an art service platform, wanted to modernize art management for artists by creating an online system, SAM, to organize artwork, payments, contacts and other important details. I aided in adding a contact management service and adding a financial subscription system. For the contact service, I used an online library of React UI components, AntD, to make the page user-friendly. The subscription system primarily used the Stripe APIs for handling online transactions. Weekly sprint meetings helped organize the team with feedback on everyone's work to ensure efficiency and quality. By the end of the internship, the contact service was completed and the foundations were set for the subscription system. The next step was to complete the subscription system and polish the SAM application, which has since been launched.

In the US, how have small software startups found market niches and committed employees despite the market dominance of major software corporations? Agile and innovative business practices, unique startup job benefits, Big Tech involvement, and Silicon Valley's tech-friendly environment all contribute to startups' success. Important participants are software corporations, startups, venture capitalists and consulting firms, and developers of the tech industry.