

Senior Design Project (8/2024 - 12/2024)

Annuity Configuration Application

** This project is under an NDA

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Sponsor – Aspida

Background and Problem Statement

Providing a dynamic ability for insurance businesses to configure and deploy products would provide a significant **speed-to-market advantage** that has been elusive in the industry. Launching new products in the insurance industry is an arduous and labor-intensive process that **spans multiple systems**. This leads to **long lead times to capture the data** required to launch a product and build the required product specs in an industry data format (ACORD PPFA).

Project Description

We are proposing a project that would focus on building a web-based UI to enable a user to capture product details, specs and requirements and save them in a centralized database. In addition, the system should allow a user to view and update these product details. Further (if there is time) the system will enable the generation of the product definition in an industry data format (ACORD PPFA) to be consumed by other systems.

The target users of the system would be product analysts that define an insurance product including terms, rates, conditions, marketing name, conditions, etc. Aspida will arrange meetings with the primary users so requirements can be captured.

Technologies and Other Constraints

This is a web-based (but mobile responsive) platform. This solution is built entirely in the cloud (AWS) and we employ cloud-native components (no EC2). This project would enable students to gain experience with a very common and popular tech stack that is in high-demand in today's job market.

Required Technology / Tech Stack Overview

User Interface (frontend) – React JS with Typescript

API (backend) – Node JS with Typescript

Database – AWS RDS Aurora Postgres DB or AWS DocumentDB

Cloud Platform – AWS, key components include AWS S3 (doc storage), AWS ECS (compute)

JSON, XML (Data formats)

Flexible on any other technologies as long as it's compatible with the tech stack above.

Data Standards

We will provide a sample of the PPFA data standard upon project start but at a high level it's a detailed XML based spec.

Presentation Slides

[Oral Progress Report 1](#)

[Oral Progress Report 2](#)

[Oral Progress Report 3](#)

[Final Sponsor Handoff](#)

[End-of-Semester Expo Presentation](#)

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