



SENG 491 – SENIOR PROJECT I

Stratify: AI-Powered Multi-Agent Business Planning Platform

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Project Name	Stratify
Project's URL	https://shahdadpeykani.github.io/senior-project/

1. Introduction

The journey from concept to launch is filled with uncertainty, whether for an aspiring entrepreneur seeking a new venture or a founder attempting to validate an existing idea. While the rapid adoption of AI has democratized access to information, early-stage founders still face significant challenges in structuring business plans, accessing reliable market insights, and assessing financial feasibility. Current tools are often fragmented and lack the ability to provide cohesive, data-driven execution guidance. Our proposed project, Stratify, introduces an AI-powered framework designed to serve as an intelligent business co-founder. By leveraging Retrieval-Augmented Generation (RAG) and a multi-agent architecture, Stratify eliminates the chaos of early-stage planning. It offers a unified pipeline that can either generate novel, market-backed ideas based on user profiles or rigorously validate and professionalize a user's existing business concept.

2. Problem Statement

Entrepreneurs and students face critical challenges during the venture planning phase, including:

- **Subjective Validation:** Founders with existing ideas often lack the objective data to verify market need, leading to bias-driven decisions and potential failure.
- **Knowledge Gaps:** Individuals often lack the structured knowledge required to conduct formal risk assessments, financial modeling, or legal compliance checks.
- **Fragmented Tooling:** There is no unified system that integrates market research, financial forecasting, and technical execution; users are forced to stitch together disparate, non-adaptive tools.
- **Execution Barriers:** Even with a validated idea, non-technical founders struggle to bridge the gap between planning and execution, particularly in establishing an initial online presence.

3. Solution Overview:

The Stratify framework acts as an automated venture architect, enforcing discipline and data-driven rigor from the initial input to the final execution plan. The system operates through a flexible, structured pipeline capable of handling two distinct user scenarios:

- Dual-Mode Input Processing:
 - **Mode A (Ideation):** The user answers structured profiling questions (e.g., skills, budget, risk tolerance), and the system utilizes an *Idea* Agent to generate personalized, market-backed startup concepts.
 - **Mode B (Validation):** The user inputs a detailed description of an existing business idea. The system parses this input to establish a baseline for analysis, skipping the generation phase to focus on rigorous validation.
- **RAG-Driven Market Retrieval:** Regardless of the input mode, the system employs a Retrieval-Augmented Generation (RAG) pipeline to fetch real-time industry data, competitor landscapes, and regulatory guidelines from a vector database.
- **Multi-Agent Intelligence:** A coordinated team of AI agents processes the concept:
 - *Market* and *Risk* agents: Conduct SWOT analysis, evaluate demand trends, and identify operational or saturation risks.
 - *Financial* agent: Performs numeric modeling to project revenue, estimate startup capital, and calculate break-even points.
- **Automated Execution & Delivery:** The finalized output serves as a comprehensive "Business-in-a-Box," including:
 - A formal business feasibility report (PDF) covering strategy, finance, and risk.
 - A deployable starter website generated by the Web Generation Agent, complete with landing page content and value propositions.