

## **Full Stack Software Engineering in AI**

### **Part 1:**

- I. Full Stack Software Engineering in Artificial Intelligence
  - A. Overview: ServiceNow, Meta, Amazon, Atlassian (Jira Service Management), IBM, Salesforce, Google, Nvidia, Adobe and Microsoft are few of businesses who have industrialized AI solutions for repetitive business processes.
  - B. A Specific Company/Corporation: ServiceNow, Inc
    1. General Information:
      - a) ServiceNow is headquartered in Santa Clara, California with 16 offices located in the United States and 2 located in Canada.
      - b) Specializes in building workflow applications organized by 4 primaries being Technology, Customer and Industry, Employee and Creator.
      - c) Products and services are delivered to businesses via the “Now Platform”, an AI workflow toolbox for each department and primary.
    2. Brief History:
      - a) ServiceNow was founded in November of 2004 by Fred Luddy beginning as a small team of 10.
      - b) Luddy's focus in the beginning was to create a cloud-based platform to route work efficiently and simply.

- c) Company went public in 2012
- d) Transitioned to offer multi department Cloud AI solutions for thousands businesses across the globe.

3. Major Players:

a) Bill McDermott

- (1) Chairman and chief executive officer
- (2) Northwestern University Master of Business Administration
- (3) The Wharton School Executive Development Program

b) Pat Casey

- (1) Chief Technology Officer, and executive vice president of DevOps
- (2) Harvey Mudd College Bachelors of Science in Neurosciences

4. Products and/or Services:

- a) ServiceNow AI is an AI hub business platform. This makes up a large portion of both offerings and income.
- b) Sub solutions and individual AI Products like AI Agents, Customer Service Management, IT Operations Management etc.

5. Reputation:

- a) Based on realtime customer and employee reviews on the company its reputation remains strong.

- b) Employees say company culture and workplace holds a team encouraging environment.
- c) Communicate with supporting clients using ServiceNow Platform.
- d) Fortune 500 business that continues to perform double digit revenue growth.

6. Trends:

- a) Information Technology Service Management with AI is moving beyond just automating business processes.
- b) AI is not here to replace but to complement employee workflows to ease everyone's work processes.
- c) A lot of small businesses or niche industries are thriving with AI platform implementations resulting in growth.

**Part 2:**

II. Myself

A. What jobs am I interested in?

- 1. Full stack software engineering as I enjoy contributing to building and understanding front-end and back-end technology.
- 2. Machine learning and or other subfields of Artificial Intelligence as learning about different ways to build ML models for different tasks is interesting.

B. Education Plan:

- 1. I will complete my 2 year academic plan at CSUMB in Computer Science.
  - a) Notable Coursework:

- (1) CST 300 & CST 349 Will improve my professional writing and presentation skills making it easier to put ideas together.
- (2) CST 338 software design will help with design patterns for bigger projects.
- (3) CST 363 Databases is core to understanding ML because without data there is no AI.
- (4) CST 334 Operating Systems builds a low level understanding on how to maximize hardware performance when programming.
- (5) CST 370 Algorithms is crucial for any form of Full Stack Engineering and even more valuable for Machine Learning.
- (6) CST 336 Internet Programming provides me with knowledge for real front-end and back-end integration.

C. Preparation outside of Education:

1. Internships is an ideal route I want to take, it provides valuable learning and real world work experience.
2. Continue building self guided Full Stack projects to learn as I code. Build realistic ML models that can solve problems in my regular life.
3. Networking is a huge focus of mine as opportunities can present themselves through networking.

4. I will be joining the programming Team at CSUMB for the purpose of networking and improving programming skills.
5. To prepare for interviews I will be using platforms like leetcode and hankerank to improve my technical skills.

## References

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