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List your career goals.

Module 2 - Using the SMART goal method develop your list of 3-4 Career goals.

1. Secure a Summer Internship: Obtain a Data Science or Machine Learning Engineer internship for Summer 2026 by applying to 30+ diverse tech companies by February 2026, leveraging my experience in NLP and ETL pipelines.
2. Master Advanced NLP Techniques: Complete an advanced project or certification focused on Large Language Models (LLMs) and Transformers by August 2026 to build upon my existing knowledge of BERT and LSTM architectures.
3. Secure a Full-Time Role: Land a full-time Machine Learning Engineer position at a technology-focused firm in the United States by December 2027 (upon graduation), utilizing my MS degree skills in Algorithms and Database Management.
4. Publish Applied Research: Submit and accept one research paper regarding efficient model fine-tuning to a recognized conference or journal by May 2027, expanding on my previous work in code summarization and serverless computing.

List your experience, skills and strengths.

Reflect back on the readings and activities you completed in Module 4 – Build Your Brand. Create a list of your top 5 skills and your top 5 strengths.

Top 5 Skills:

1. Natural Language Processing (NLP): (e.g., Transformers, BERT, Seq2Seq)
2. Machine Learning Frameworks: (e.g., PyTorch, TensorFlow, Scikit-Learn)
3. Data Engineering & ETL: (e.g., SQL, Pandas, Pipeline development)
4. Programming: (e.g., Python, C++, JavaScript)
5. Statistical Analysis & Clustering: (e.g., K-Means, Hypothesis testing)

Top 5 Strengths:

1. Process Optimization
2. Research & Technical Writing
3. Algorithmic Problem Solving
4. Adaptability (Learning New Technologies)

5. Scalability Analysis

Examples of Top 3 Skills:

- Natural Language Processing: I demonstrated this skill by fine-tuning a BERT model to classify research papers across 10 categories and building a Seq2Seq LSTM-based translation system that achieved a BLEU score of 24.3.
- Data Engineering (ETL): I utilized this skill during my internship at AICTE, where I developed an ETL pipeline using Pandas and SQL to process over 5 million retail transaction records into unique customer profiles.
- Machine Learning (Clustering): I applied this skill by implementing a K-Means clustering algorithm with automated hyperparameter tuning to identify 5 distinct customer segments for targeted marketing.

Examples of Top 3 Strengths:

- Process Optimization: I demonstrated this strength by optimizing a training pipeline with gradient clipping and teacher forcing, which reduced convergence time by 30%, and by implementing abstract tokenization that reduced training time by 40%.
- Research & Technical Writing: I showed this strength by publishing papers on "Advanced Retrieval-Based Code Summarization" and "Serverless Computing," analyzing complex topics like scalability and cost efficiency.
- Scalability Analysis: I demonstrated this strength by analyzing serverless architectures to demonstrate a 40% cost reduction and designing encoders capable of handling variable-length sequences up to 50 tokens

Create your list of companies you'd like to work for.

Module 3 – Researching the Job Market. Modify the list to include 6-8 companies that interest you the most.

1. Google: I want to work here because of their leadership in NLP (BERT/Transformers) and Deep Learning research. My experience fine-tuning BERT and working with TensorFlow aligns perfectly with their tech stack.
2. Amazon (AWS): I am interested in their cloud infrastructure and serverless computing divisions. My published research on Serverless Computing and AWS Lambda makes me a strong candidate for their cloud optimization teams.
3. Microsoft: Their heavy investment in AI (OpenAI partnership) and developer tools appeals to me. My project on automated code summarization aligns with tools like GitHub Copilot which they own.
4. Databricks: I admire their focus on unified data analytics. My internship experience building ETL pipelines for 5M+ records and using Apache Spark

demonstrates my ability to handle the large-scale data engineering challenges they solve.

5. NVIDIA: As a leader in AI hardware and software, their work powers the deep learning models I use (like CNNs and Transformers). I want to work in an environment that pushes the boundaries of computing performance.
6. Salesforce: I am interested in their "Einstein" AI platform. My background in customer segmentation using K-Means clustering and retail transaction analysis is directly applicable to their CRM AI solutions.
7. HubSpot: Based in Boston (near Northeastern), they are a leader in marketing tech. My experience creating recommendation engines and REST APIs for real-time inference would add value to their marketing automation tools.

Create a "to-do" list prior to starting your job search.

Create a "to do" list of the top 5 items that you plan to accomplish as you start your job search.

1. Update LinkedIn & GitHub: Upload my "Research Paper Classifier" and "Neural Machine Translation" code to GitHub repositories and update my LinkedIn headline to "MS CS Student at Northeastern | AI & ML Specialist."
2. Refine Technical Interview Skills: Solve 50 LeetCode problems focusing on Data Structures and Algorithms (Strings, Arrays, and Trees) to prepare for technical screenings.
3. Draft Cover Letters: Create 3 template cover letters tailored to Data Science, Machine Learning Engineer, and Data Engineer roles, highlighting my internship at AICTE.
4. Network with Alumni: Connect with 10 Northeastern alumni currently working at my target companies (e.g., Google, HubSpot) via LinkedIn to request informational interviews.
5. Research Application Portals: Identify and bookmark the careers pages for my top 8 target companies and set up job alerts for "Machine Learning Intern" roles.

What is your professional brand?

Refer to Module 4 – Build Your Brand – the module in which you created your Professional Introduction (Elevator Pitch).

"Hi, I'm Sejal Barshikar. I'm a graduate student at Northeastern University pursuing my Master's in Computer Science with a focus on Machine Learning and Deep Learning. I graduated from Savitribai Phule Pune University with a degree in AI, where I developed a strong foundation in neural networks and published research on meta-learning applications for code summarization.

During my internship at AICTE, I built an end-to-end customer segmentation and recommendation system that processed over half a million transaction records. Beyond that, I've worked on multiple projects in computer vision and natural language processing. I'm particularly skilled in PyTorch, TensorFlow, and building production-ready ML pipelines.

I'm currently seeking opportunities as a Machine Learning Engineer, as I'm drawn to roles where innovation meets real-world impact. I'd love to learn more about opportunities at your organization

Participate in networking opportunities.

Module 5 – Building Your Network. Insert a list of 3-4 Networking events you plan to attend here.

1. Northeastern Khoury College of Computer Sciences Career Fair: To meet recruiters from local Boston tech companies and diverse startups.
2. Boston AI & Machine Learning Meetup: To network with industry professionals working specifically in my concentration of AI/ML.
3. ODSC East (Open Data Science Conference) - Boston: To attend workshops on the latest NLP trends and network with data science leaders.
4. Women in Data Science (WiDS) Cambridge/Boston: To connect with mentors and peers in the data science field and discuss career development.