

## [Springboard] MLE Career Track - Mentor Skills Assessment

Thanks for applying to be a mentor with Springboard, it really is an amazing way to give back professionally and keep your own skills sharp! Before your interview we would love for you to fill out a quick skills assessment below.

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Not **ashkan.yousefi@gmail.com**? [Switch account](#)

\* Required

What is your name?

Ashkan Yousefi

**Please rate your skill level for each unit on a scale of 1-5.**

1= Novice (Little to no practical experience) 5 = Expert (One of your biggest strengths and you do this on a daily basis.)



### Unit 1: The Machine Learning Engineering Stack \*

1. The Python Data Science Stack: Pandas, scikit-learn, Keras, TensorFlow, spaCy
2. Data Engineering tools: Spark/PySpark, Containers, Cloud Computing
3. Software engineering: Continuous integration, Github, testing and debugging
4. Basic data structures and algorithms: lists, hash tables, trees, sorting, searching

	1	2	3	4	5	
Novice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Expert

### Unit 2: Data Wrangling at Scale \*

1. Collecting data: APIs, real-time systems, web scraping
2. Cleaning and transforming data for AI systems at scale
3. Working with large data sets in SQL and NoSQL databases
4. Tools such as Pandas, Spark, Dask, SQL, Spark SQL

	1	2	3	4	5	
Novice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Expert



## Unit 3: Foundations of Machine Learning \*

1. Supervised and unsupervised learning
2. Linear and Logistic Regression, Decision Trees and Ensembles
3. Scalable algorithms: XGBoost, Catboost
4. Feature engineering and selection, model validation and interpretation
5. Scaling ML models to large data sets
6. Tools: scikit-learn, SparkML, Auto-ML systems

	1	2	3	4	5	
Novice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Expert

## Unit 4: A Deep Dive into Deep Learning \*

1. Overview of Neural Networks, Backpropagation and foundational techniques
2. Principles of Deep Neural Networks
3. Common Deep Neural Network configurations e.g. RNNs, CNNs, MLPs, LSTMs
4. Generative Deep Learning and GANs
5. Engineering Frameworks: Keras, TensorFlow, PyTorch

	1	2	3	4	5	
Novice	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Expert



## Unit 5: Natural Language Processing \*

1. How to work with text and natural language data
2. NLP in Python, using common libraries such as NLTK and spaCy
3. Representing language: BOW, TF-IDF, word embedding models (word2vec, GloVe, FastText)
4. Deep Learning techniques for NLP
5. Chatbots and other modern NLP applications

	1	2	3	4	5	
Novice	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Expert

## Unit 6: Computer Vision \*

1. Foundations of computer vision and/or image processing
2. Common challenges in vision e.g. object recognition
3. Deep Learning for images and/or video

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Unit 7: Building and Deploying Large-Scale AI Systems \*

1. Common tools and techniques to build large-scale AI applications
2. Containers (Docker/Kubernetes) and deploying ML applications
3. Real-time data processing using tools such as Kafka/Faust
4. Making your application available via an API or a web service
5. Application and data security

1

☐

2

☐

3

☒

4

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5

☐

Tell us about a ML project you were involved in. \*

Please explain your role in **designing**  
and **deploying** it.

I implemented AI for the educational app and also AI for the agriculture tech company and my role was data scientist to create a pipeline for data pre-processing, model selection, model performance comparison and putting the model into the production using the AWS Sagemaker.

Please upload a sample Python script



Sample ash.ipynb



Thanks for taking the time to fill out the skills assessment! See you on the call.

Submit



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