

JOB DESCRIPTION – Machine Learning Engineer



Department: Data Science & Engineering	Supervisor: Vice President – Data Science & Engineering
# of Direct Reports: 0-3 (depends on prior experience)	Status: Salary/Exempt

Here is an opportunity to join Sentient Science, a company whose solutions lie at the convergence of many exponentially accelerating innovative technologies: Cloud, edge computing and the Industrial Internet of Things (IoT); AI, machine learning and deep learning; Big Data and analytics; and 3D printing (additive manufacturing). Sentient Science helps customers lower the costs of designing, operating, and sustaining their high value mechanical assets by providing digital twin technology that predicts the life of mechanical systems. Sentient's DigitalClone[®] SaaS solutions use proprietary algorithms derived from physics-based modeling and machine learning. Help us achieve our vision of a world where rotorcraft manufacturers, wind energy operators and railroads rely on Sentient DigitalClone for a digital implementation of their O&M cost reduction strategy. And a high concentration of PhDs will keep you intellectually stimulated and challenged.

Position Summary:

The Machine Learning Engineer will occupy a strategic role with an unwavering focus on production deployment of current and future machine learning models as well as reduced-order physics models. Individual in this position will have a strong background in computer science and software engineering as well as demonstrable experience exhibiting strong commitment to software engineering best practices in building machine learning systems. The candidate needs to have a broad exposure to a wide variety of machine learning techniques including but not limited to damage-anomaly detection, natural language processing, explainability-driven deep learning and time-series forecasting. Being able to a) work in an ego-less capacity with a diverse team, b) communicate complex concepts in simple language to diverse stakeholders and, c) display unwavering commitment to empathy and customer obsession is highly valued. The title and associated responsibility for the position can be modified for the right candidate – if our mission inspires you, please send resume and cover letter to careers@sentientscience.com.

Responsibilities:

- Lead efforts to develop/integrate automated software solutions for understanding model performance, workflow tracking, logging and validation, as well as prediction explainability
- Influence and communicate at a variety of levels across a diverse set of stakeholders, including team members, product leadership and software engg leaders
- Lead initiative to develop / integrate leading edge tools and frameworks to build scalable and efficient machine learning solutions
- Focus on building best practices within and across your global teams to drive effective outcome and a progressive mindset
- Work with a team of Data Scientists, SMEs, Data Engineers and Software Engineers to architect, develop and deploy scaleable end-to-end model workflow systems (for both machine learning and reduced order models)
- Act as knowledge leader by staying updated on emerging trends in the fast-moving AI/ML domain and introducing well-researched concepts and frameworks into our software architecture and solutions.
- Own current roadmap items specific to design and development of scalable machine learning services and data platforms.
- Utilize benchmarks, metrics, and monitoring to measure and improve data-driven services.

Experience & Qualifications:

- Bachelors (Bnous points for grad school!) in Computer Science, Software Engineering or other relevant disciplines
- Strong DevOps, Data Engineering and ML-focused software engineering background
- 3-5 years of experience with machine learning systems – progressive experience showing transition from a standard software engineering role to ML/AI software design/deployment systems is desirable
- Experience with frameworks and packages such as TensorFlow, PyTorch, Sagemaker, scikit-learn or similar

- Experience with one or more of MLOps tools: ModelDB, MLFlow, Pachyderm, Data Version Control (DVC) etc.
- Demonstrable exposure and experience to building and deploying end-to-end systems using either in-house infrastructure or cloud ML environments e.g. SageMaker
- Strong understanding and demonstrable experience of software testing, benchmarking, and continuous integration
- Comfortable working with AWS CLI, bash, regex and Linux SysAdmin
- Exposure or experience to data serving tools and products such as AWS S3, AWS Lambda, Elasticsearch, Spark etc.
- Solid experience setting up and optimizing DBs for production usage for ML systems
- Solid experience in one or many of the following: Docker, Kubernetes, Jenkins, Spark, Kafka, HDFS, Cassandra
- Solid experience with data storage formats such as Parquet, Arrow, HDF5, NetCDF as well as with relational databases
- Adept with current-generation tools-of-the-trade such as Python, SQL, git, bash, Jira and keen to learn and use new ones as needed
- Demonstrated experience working with modeling solutions/platforms using large (TB+) repositories of structured and unstructured data spanning forms such as numeric, text, images/rasters
- Possess a curious mind, insatiable drive to learn proactively and profound humility and empathy for your colleagues as well the customer
- While we encourage candidates to apply regardless of immigration status, preference will be given to candidates who are US citizens.

Benefits

- Unlimited paid time-off
- Flexible working hours and fully remote option available
- Employer-sponsored health insurance
- Our commitment to **inclusion** across race, gender, age, religion, identity, and experience drives us forward every day