Senior Data Scientist

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Type: Full-Time
Posted: Today
Category: Laboratory and Research
Military

Carnegie Mellon University

What We Do:

Data Scientists at the SEI use advanced statistics, data analytics, machine learning, and artificial intelligence to help our government and industry clients research and solve cybersecurity challenges. In this role, you will work with our customers to identify areas where advanced statistical techniques can help tackle problems, plan and develop prototype solutions, and build out final products. You'll get a chance to work with elite cybersecurity professionals and university faculty to build new technologies that will influence national cybersecurity strategy for decades to come. You will co-author research proposals, execute studies, and present findings to DoD sponsors and at academic conferences. Our team works on a wide range of projects. Our current work includes research in generative AI and large language models, computer vision, multimodal AI, agentic AI, and assurance of AI systems. Additionally, we craft metrics and experimental designs for large-scale cybersecurity research programs, develop human-in-the-loop machine learning solutions, and build classifiers to identify security vulnerabilities. If you are a data science or statistics expert with an interest in cybersecurity, we want to hear from you! **Requirements:**

- BS in data science, machine learning, computer science, statistics, or related highly-quantitative discipline with ten (10) years of experience or equivalent combination of training or experience; or MS in data science, machine learning, computer science, statistics, or related highly-quantitative discipline with eight (8) years of experience; or PhD in data science, machine learning, computer science, statistics, or related highly-quantitative discipline with five (5) years of experience.
- Willingness to complete modest travel to various locations to support the SEI's overall mission.
- You will be subject to a background check and must be able obtain and maintain a U.S. Department of Defense security clearance.

Knowledge, Skills and Abilities:

- Experience in predictive modeling, data science, and/or AI & machine learning
- Deep understanding of statistical modeling techniques and advanced data analytics
- Proficient with at least one mathematical/statistical programming package (e.g., R, python numpy/scipy/pandas/polars, MATLAB, etc.)
- Innovative and inquisitive with ability to imagine novel analytical solutions to problems Thrives in a multi-disciplinary environment
- Strong communication skills
- Expertise in **one or more** of the following:
- Recommendation systems
- Time-series forecasting (Prophet, NeuralProphet, Chronos, Lag-Llama, etc.)
- NLP / LLMs (fine-tuning, RAG, evaluation, prompt engineering)
- Causal inference / uplift modeling / synthetic controls
- Modern ML frameworks: LightGBM/XGBoost, CatBoost, PyTorch,JAX, TensorFlow)
- LLMs / agentic workflows (LangChain/LlamaIndex/Haystack)
- Experience deploying models (FastAPI, Triton, KServe, SageMaker, Vertex AI, or similar)
- Experience working with big data (Spark, Trino, Snowflake, BigQuery, Databricks)

Desired Experience:

- Experience in cybersecurity and privacy is a plus is a plus
- Experience in U.S. Govement work and/or with FFRDCs, UARCs an National Labs is a plus
- Demonstrated ability to learn new concepts and grow into new areas of work

Joining the CMU team opens the door to an array of exceptional benefits.

Benefits eligible employees enjoy a wide array of benefits including comprehensive medical, prescription, dental, and vision insurance as well as a generous retirement savings program with employer contributions. Unlock your potential with tuition

benefits, take well-deserved breaks with ample paid time off and observed holidays, and rest easy with life and accidental death and disability insurance.

Additional perks include a free Pittsburgh Regional Transit bus pass, access to our Family Concierge Team to help navigate childcare needs, fitness center access, and much more!

For a comprehensive overview of the benefits available, explore our Benefits page.

At Carnegie Mellon, we value the whole package when extending offers of employment. Beyond credentials, we evaluate the role and responsibilities, your valuable work experience, and the knowledge gained through education and training. We appreciate your unique skills and the perspective you bring. Your journey with us is about more than just a job; it's about finding the perfect fit for your professional growth and personal aspirations.

Are you interested in an exciting opportunity with an exceptional organization?! Apply today!

Location

Arlington, VA, Pittsburgh, PA
Job Function

Software/Applications Development/Engineering
Position Type

Staff - Regular
Full Time/Part time

Full time
Pay Basis

Salary
More Information:

- Please visit **"Why Carnegie Mellon"** to learn more about becoming part of an institution inspiring innovations that change the world.
- Click here to view a listing of employee benefits
- **Carnegie Mellon University is an Equal Opportunity Employer/Disability/Veteran**.
- **Statement of Assurance**

Carnegie Mellon University does not discriminate and Carnegie Mellon University is required not to discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex or handicap in violation of Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973 or other federal, state, or local laws or executive orders.

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