Digital Manufacturing: CW-Senior Engineer

Position: CW-Senior Engineer (Remote)

Contract Term: 1 year with potential for extension

Description: Digital Integration & Predictive Technologies (DIPT) at Amgen is seeking applications for a Senior Engineer position with expertise in *Instrumentation, Modeling, and Control of Complex Systems* to help drive Amgen's Global Digital Manufacturing initiative through advanced process modeling. As a Senior Engineer, you will be joining the Predictive Modeling Team within the DIPT organization in Process Development. Predictive Modeling is a core group within the Digital Manufacturing Group involved in developing advanced mathematical, statistical, and machine learning modeling techniques to deliver innovative and practical solutions to complex systems engineering problems rising in biomanufacturing. As a Predictive Modeling Team member, the candidate will primarily focus on developing advanced modeling solutions for real-time process monitoring, fault detection and diagnosis, soft-sensing, process optimization, and process control. The candidate will be responsible for both the development and deployment of innovating modeling solutions to meet the current and future needs of the biomanufacturing network.

The candidate should have an extensive academic and research background in process systems engineering (process modeling, identification, monitoring, fault detection, advanced process control) and strong programming proficiency (e.g., Python, R, MATLAB). A strong understanding of statistics and process systems engineering is a must. Candidate with experience in developing solutions for industrial problems or with industrial postdoctoral experience will be preferred. The candidate should be comfortable working on multiple projects, meeting strict project timelines, and communicating with various stakeholders.

Basic Qualifications:

1. Ph.D. degree or Master's degree with four years of directly related experience;
2. Strong academic and research background in process systems engineering;
3. Strong background in multivariate statistics and dynamic systems; and
4. Strong background in statistical-learning/machine-learning/data science.

Preferred Qualifications:

1. PhD. in Chemical Engineering, Electrical Engineering, Systems Theory, Control Engineering preferably with expertise in industrial processes;
2. Experience working on industrial problems or industrial post-doc experience;
3. Practical experience in system and network integration;
4. Experience in Python/Matlab/R;
5. Strong analytical skills with the ability to collect, organize, analyze, and disseminate significant amounts of information with attention to detail and accuracy;
6. Independent, self-motivated, organized, able to multi-task in project environments, and skilled in communication, facilitation, and collaboration;
7. Team player prepared to work in and embrace a team-based culture that relies on collaboration for effective decision-making; and
8. Solid leadership, technical writing, and communication/presentation skills

Employee Value Proposition: This position will provide a unique opportunity to put your expertise at the frontline of biomanufacturing. You will get an opportunity to work on various practical industrial problems, develop innovative solutions, and deploy them straight in biomanufacturing. You will actively work and collaborate with the Process Development, Manufacturing, and Operations Team members giving you a unique experience and perspective to biomanufacturing. You will also have an opportunity to publish your work in reputed journals and file patents on your innovative ideas. All the projects you are involved in will positively impact key processes that support human therapeutic manufacturing and the patients who use them.