

Job Description - Junior 3D Printing Applications Engineer

Job Overview:

Z-Polymers is seeking a detail-oriented and proactive **Junior 3D Printing Applications Engineer** to support internal development and validation of our Tullomer filament for FDM 3D printing. This role is primarily lab-based and focused on running print trials, executing internal test plans, and delivering high-quality printed parts for technical validation and customer samples. The ideal candidate is a self-starter who thrives in a hands-on environment, can manage multiple printing projects simultaneously, and consistently meets deadlines with minimal supervision.

Key Responsibilities:

1. Printing & Technical Execution (Primary Focus):

- Operate and maintain a variety of FDM printers (desktop and industrial) to execute internal testing and print projects.
- Run print jobs as directed by senior team members for internal R&D, application development, and customer sample requests.
- Independently manage print queues and deliverables, ensuring parts are completed accurately and on schedule.
- Troubleshoot print failures and inconsistencies, documenting learnings, and improvements.

2. Process Optimization & Material Profiling:

- Assist in refining print settings, slicer profiles, and process parameters for Tullomer across different printer platforms.
- Participate in Design of Experiments (DOE) to optimize print quality and performance.
- Maintain up-to-date documentation of printer setups, profiles, and procedural adjustments.

3. Physical Testing Support:

- Prepare and print test specimens for mechanical and dimensional validation.
- Responsible to conduct Quality control and reporting for each production run.
- Support physical testing workflows including tensile testing, dimensional analysis, and visual inspections.
- Record and communicate findings to the business, engineering and R&D teams for further refinement.

4. Sample Development & Internal Collaboration:

- Produce sample parts for marketing, sales, and customer demonstrations based on internal requests.
- Collaborate closely with engineering and marketing teams to translate design intent into physical parts.
- Help create and organize a library of successful sample prints, print profiles, and printing tips.

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5. Lab Organization & Maintenance:

- Ensure the 3D printing lab is well-organized, clean, and stocked with necessary supplies and tools.
- Perform routine maintenance on printers and assist in troubleshooting hardware/software issues.

Required Qualifications:

- Bachelor's degree in engineering, materials science, or a related technical field (or equivalent practical experience).
- Hands-on experience with FDM 3D printing, including setup, calibration, and troubleshooting.
- Familiarity with slicer software such as Cura, PrusaSlicer, Simplify3D, or similar.
- Ability to manage multiple print jobs and follow through on detailed execution plans.
- Strong organizational and time management skills.
- Proficiency in CAD software (e.g., SolidWorks, Fusion 360) and ability to design mechanical fixtures, test setups, and custom printer modifications.

Preferred Qualifications:

- Experience operating multiple types of 3D printers (desktop and industrial grade).
- Exposure to mechanical testing and data collection methods.
- Previous work or internship in a lab or R&D setting.
- Knowledge of additive manufacturing materials and common failure modes.

Key Attributes for Success:

- **Execution-oriented:** Takes initiative, follows directions accurately, and delivers results on time.
- **Technically curious:** Willing to learn and iterate on print settings, parameters, and troubleshooting.
- **Organized and reliable:** Manages print queues and documentation with care and consistency.
- **Collaborative:** Works well with internal teams to support shared goals.
- **Detail-focused:** Understands the impact of precision and consistency in print quality and testing.

What We Offer:

- A key role in shaping high-performance materials for the next generation of 3D printing.
- A collaborative startup culture that values hands-on innovation and continuous improvement.
- Competitive salary and benefits package.
- Please send resumes to info@z-polymers.com