SUBCRITICAL SYSTEMS · JOB OPPORTUNITY

CAD Designer (AI/CAD Integration)

Department	Mechanical Engineering	**Posted**	August 14, 2026
Location	Austin, TX (on site)	**Employment**	Full-Time

ABOUT SUBCRITICAL SYSTEMS

Subcritical Systems, Inc. is a venture-backed startup in Austin, Texas building the accelerator driven systems and the only US commercial manufacturer of accelerator cavities. What Space X did for rockets, we plan to do for accelerator cavities and commercialize across applications of power production, medical isotopes, semiconductors and waste transmutation.

We are in the process of building the Energy Amplifier — a novel nuclear fission system in which a particle accelerator drives a subcritical core, making meltdown physically impossible for clean power production. Due to its inherent safety, our system has a more streamlined licensing process. Our founding team includes successful entrepreneurs with a track record of building several multibillion dollar companies in deep-tech, and scientists who were leading U.S. national labs with deep experience in accelerator & nuclear technologies.

We are actively hiring to expand our team as we work toward licensing, regulatory submissions, and construction of our first energy amplifier. More information is available at subcritical.com.

ROLE SUMMARY

Subcritical Systems is seeking a CAD Designer to join our mechanical engineering team and help bridge ATLAS, our AI-driven engineering platform, with conventional CAD design workflows. ATLAS is SSI's internal multi-agent AI platform that automates design, simulation, and documentation work across engineering; its CAD automation tools (VIBE CAD) generate first-pass geometry and drawing templates. Working directly under the Lead Mechanical Designer, this role refines those first-pass outputs into production-quality 3D models, assemblies, and detailed fabrication drawings in Siemens NX.

The role serves as a key interface between AI-generated CAD design and traditional engineering design practice: validating, refining, and standardizing ATLAS-generated outputs for use by the broader mechanical engineering team. You will also be the voice of the customer for ATLAS: we are building the platform to fit the normal CAD workflow designers are used to, and your feedback shapes how it develops. The ideal candidate is eager to develop strong fundamentals in precision mechanical design (cryogenic, vacuum, and RF hardware) while working at the forefront of AI-assisted engineering: automated geometry generation, design iteration, drafting, and model validation.

This is a hands-on position for a designer who wants to deepen their Siemens NX expertise while

helping define how AI-generated engineering designs move from ATLAS into validated, manufacturable CAD.

KEY RESPONSIBILITIES

- Refine first-pass geometry, templates, and design outputs generated by ATLAS (VIBE CAD) into production-quality 3D models, assemblies, and detailed fabrication drawings in Siemens NX, making them reasonable, standards-compliant, and buildable.
- Validate, refine, and standardize ATLAS-generated outputs against design intent and internal drafting standards before release to the broader mechanical engineering team.
- Apply AI-assisted CAD tools and workflows (generative design exploration, AI-assisted drafting and checking, NX Open/Knowledge Fusion automation, and AI copilots for documentation) as a standard part of daily modeling and drafting work.
- Assist in building and maintaining CAD automation scripts and templates (NX Open, Python) that connect NX with ATLAS to reduce repetitive drafting tasks, with guidance from senior team members.
- Develop and maintain 3D CAD models and assemblies in Siemens NX for cryomodule components, sub-assemblies, and supporting tooling, under the direction of the Lead Mechanical Designer.
- Produce detailed, manufacturing-ready 2D drawings, including dimensioning, tolerancing (GD&T), and BOM generation, following ASME Y14.5 and internal drafting standards.
- Support design iteration for cryogenic, vacuum, and superconducting RF (SRF) hardware, and maintain accurate part and assembly data in the PLM/document control system with proper revision control and traceability.
- Participate in design reviews, redlines, and ECOs, and coordinate with mechanical, cryogenic, and RF engineers to turn design intent into accurate, buildable CAD deliverables, supporting interference checks and tolerance stack-up studies as needed.

QUALIFICATIONS

Required

- Bachelor’s degree in mechanical engineering, mechanical design, engineering technology, or a related field.
- 2+ years of professional CAD design or drafting experience.
- Working proficiency in Siemens NX (modeling, assemblies, and drafting modules), with a basic understanding of GD&T and mechanical drawing conventions.
- Genuine interest in learning and applying AI-based design, drafting, and automation tools as part of daily CAD work.
- Strong attention to detail, organizational skills, and willingness to take direction and feedback from senior designers and engineers.
- Effective written and verbal communication skills for cross-functional collaboration.

Preferred

- Exposure to cryogenic, vacuum, or superconducting RF (SRF) hardware, or particle accelerator components.
- Familiarity with NX Open, Knowledge Fusion, or basic Python/scripting for CAD automation.
- Hands-on experience with AI copilots (Claude, ChatGPT, or similar) for engineering documentation, checklists, or design research.
- Experience with a PLM/document control system (e.g., Teamcenter).

- Experience with sheet metal, weldments, machined components, or brazed/welded vacuum vessels.
- Basic familiarity with tolerance stack-up analysis and manufacturing processes (machining, welding, brazing).

AI TOOL UTILIZATION

Subcritical Systems is building AI-augmented design workflows into our mechanical engineering process through ATLAS, and this role is central to that effort. The CAD Designer will be expected to:

- Use AI-assisted CAD features (generative/topology exploration, AI-driven design checks, automated drawing annotation) as a standard part of the modeling and drafting workflow, not as an occasional experiment.
- Use AI copilots to speed up documentation, engineering change notices, drawing notes, and design rationale write-ups.
- Help pilot and evaluate new AI-enabled CAD/PLM features as they become available, acting as the voice of the customer: providing feedback to the Lead Mechanical Designer and the AI/software team so ATLAS fits the normal CAD workflow rather than disrupting it.
- Build basic automation (scripts, templates, macros) that connects NX with ATLAS to reduce manual, repetitive drafting work.
- Maintain sound engineering judgment when using AI tools. Our workflows are human-in-the-loop by design: all AI-assisted outputs are reviewed and verified by the designer and checked by senior engineering staff before release.

WHAT SUCCESS LOOKS LIKE

- Within 90 days: comfortably modeling and drafting standard cryomodule components in NX with minimal supervision, and using at least one AI-assisted tool in the regular workflow.
- Within 6 months: independently producing release-ready drawing packages and validating ATLAS-generated geometry for use by the team.
- Within 12 months: acting as the team’s go-to resource for AI-augmented CAD techniques while continuing to grow technical depth in cryomodule design.

BENEFITS

We offer health, dental, and vision insurance.

LOCATION & WORK POLICY

This role is fully in person in Austin, Texas. Our facility is located next to Austin Airport.

HOW TO APPLY

Apply on LinkedIn or submit your resume and a brief cover letter to careers@subcritical.com with the subject line "CAD Designer - Application". Include a brief portfolio or sample of prior CAD or drafting work (school projects are welcome). Applications are reviewed on a rolling basis. Subcritical Systems Inc. is an equal opportunity employer.