



Paris Davenport

Concept Design Engineer, Product Innovation

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SUMMARY

Concept design engineer with eight years of experience turning early product ideas into tested, manufacturable solutions. Develops mechanical concepts through SolidWorks CAD, **engineering analysis**, **materials research**, user insights, fabrication, 3D printing, and rapid prototyping. Leads cross functional work with designers, engineers, and manufacturing partners, translating technical findings into clear presentations and practical design decisions. Manages prototype testing cycles, documents feasibility results, and supports Stage Gate new product development activities. Experience includes **design for manufacturing**, emerging technology research, **intellectual property documentation**, and user centered improvements. A thoughtful, hands on approach helps teams move from uncertain ideas toward validated concepts with stronger production readiness and clear business value.

EXPERIENCE

Lead Concept Design Engineer

Innovation Works Group 📅 January 2022 - Present 📍 Chicago, IL

Leads concept development for new product initiatives, guiding **mechanical design**, SolidWorks modeling, prototype testing, manufacturing reviews, user centered improvements, and intellectual property documentation. Partners with designers and engineers from early research through feasibility decisions, helping innovation teams select practical concepts and maintain clear technical records.

- Directed **SolidWorks** concept studies for new products, clarifying feasibility decisions for design teams.
- Built 3D printed prototypes for form testing, giving stakeholders tangible options during reviews.
- Applied **design for manufacturing** principles, improving production readiness before engineering handoff.
- Managed **prototype testing** cycles, recording design decisions and guiding focused iteration.
- Partnered with designers on user centered improvements, connecting research findings with mechanical solutions.
- Supported **intellectual property documentation**, strengthening records for innovation reviews and concept decisions.

Concept Design Engineer

Product Engineering Studio 📅 June 2018 - December 2021 📍 Naperville, IL

Developed early stage product concepts through CAD modeling, fabrication, materials evaluation, technical communication, and Stage Gate **product development** support. Worked with engineering teams to compare manufacturing approaches, build physical **proof of concept models**, study emerging technologies, and communicate recommendations through visual models and engineering documentation.

- Developed early **product concepts** in CAD, giving engineering teams clear options for feasibility review.
- Built physical prototypes with **3D printing** and workshop **fabrication**, supporting hands on concept evaluation.
- Evaluated materials and manufacturing approaches, guiding practical choices for product feasibility studies.
- Presented technical concepts through visual models, helping reviewers compare form and function quickly.
- Supported Stage Gate activities with engineering documentation, keeping concept decisions visible across reviews.
- Researched **emerging technologies**, identifying potential applications for future product opportunities.

STRENGTHS

- 💡 **Concept Translation**
Turns early ideas into tangible CAD models and prototypes. Teams gained clearer options during feasibility reviews.
- 🔧 **Hands On Prototyping**
Builds physical models through 3D printing and fabrication. Early testing made difficult design choices easier.
- ⚙️ **Manufacturing Judgment**
Applies production thinking before handoff. Manufacturing partners received concepts with fewer avoidable concerns.
- 💬 **Technical Communication**
Uses visual models and presentations to explain design choices. Review conversations became more focused and useful.
- 👥 **Collaborative Innovation**
Works closely with designers and engineers on user centered improvements. Colleagues sought input during challenging reviews.

SKILLS

Mechanical Design

SolidWorks CAD

Product Development

Rapid Prototyping 3D Printing

Manufacturing Processes

User Centered Design

Materials Research

Technical Presentations

Concept Development

Engineering Analysis

Stage Gate NPD Fabrication

Feasibility Testing

Intellectual Property

LANGUAGES

English Native

French Intermediate

MY CAREER



● Lead Concept Design Engineer at Innovation Works Group (4.7 Years)

● Concept Design Engineer at Product Engineering Studio (3.5 Years)

PROJECTS

Rapid Prototype Feasibility Program 📅 2024

Created a repeatable concept evaluation approach using SolidWorks models, 3D printed forms, fabrication methods, and documented testing. Helped teams compare alternatives early and build stronger evidence for product development decisions.

User Centered Mechanical Concept Study 📅 2021

Connected user insights with mechanical design exploration, materials research, and visual presentations. Produced practical concept directions that supported collaborative reviews and clearer decisions before formal product development.

LEADERSHIP & AWARDS

- Recognized by innovation leadership for clear concept presentations and practical feasibility recommendations.
- Selected by engineering peers as a trusted contributor during prototype reviews and design decisions.

EDUCATION

Bachelor of Science in Mechanical Engineering

Illinois Institute of Technology 🎓 GPA: 0 📅 2018 📍 Chicago, IL

Coursework: Mechanical design, materials science, manufacturing processes, product development

CERTIFICATIONS

- SolidWorks Associate Certification 📅 2019
- Mechanical Design Certification 📅 2018

TECHNICAL SKILLS

- **CAD Software:** SolidWorks, CAD modeling, 3D assemblies
- **Prototype Methods:** 3D printing, fabrication, rapid prototyping
- **Mechanical Engineering:** Mechanical design, engineering analysis, feasibility studies
- **Manufacturing Design:** Design for manufacturing, production readiness, manufacturing reviews
- **Product Development:** Stage Gate, new product development, concept validation
- **Materials Engineering:** Materials research, material selection, material feasibility
- **User Research:** User insights, user centered design, user needs analysis
- **Technical Communication:** Technical presentations, visual models, engineering documentation
- **Testing Practices:** Prototype testing, design evaluation, validation testing
- **Innovation Management:** Emerging technologies, innovation reviews, concept strategy
- **Fabrication Tools:** Workshop fabrication, physical models, proof of concept models
- **Intellectual Property:** IP documentation, invention records, innovation review support

PROFESSIONAL AFFILIATIONS

- Professional collaboration with mechanical designers, product engineers, and manufacturing partners across concept reviews.
- Active participation in cross functional innovation reviews focused on user needs, feasibility, and product readiness.

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST