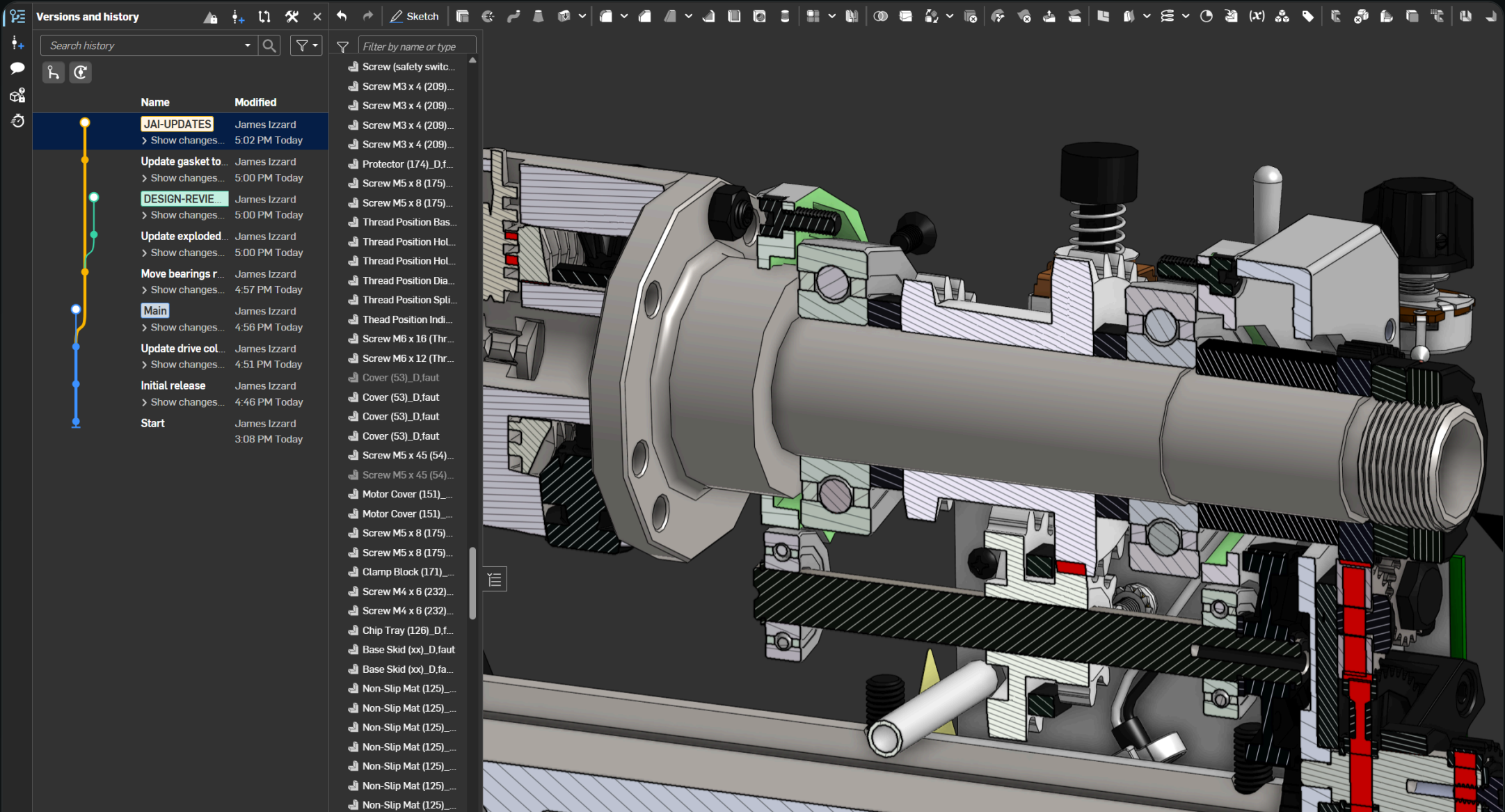


Engineering Design for Founders and Researchers

Chartered Mechanical Engineer specialising in efficient, agile prototype development under tight timelines & budgets.



I'm James, an independent Chartered Mechanical Engineer. If you need a working prototype fast, I can help. I specialise in early-stage technical product development for founders, start-ups, scientists, and inventors.

Products frequently fail at the start. The quickest way to learn is to build something real, expose risks and adjust. I focus on early research and product prototypes that surface design faults, supply risks and usability gaps while the design is still flexible.

You will gain access to my trusted network of technical, design and manufacturing experts. Together we move quickly, keep spending tight and give your ideas the best chance of success.

- First prototypes and proof-of-principle rigs
- Research tools and test equipment
- Investor-demo hardware
- Tight budgets and timelines
- Short, iterative build-test loops
- Slot-in support for larger teams

See my full background →

Flexibility

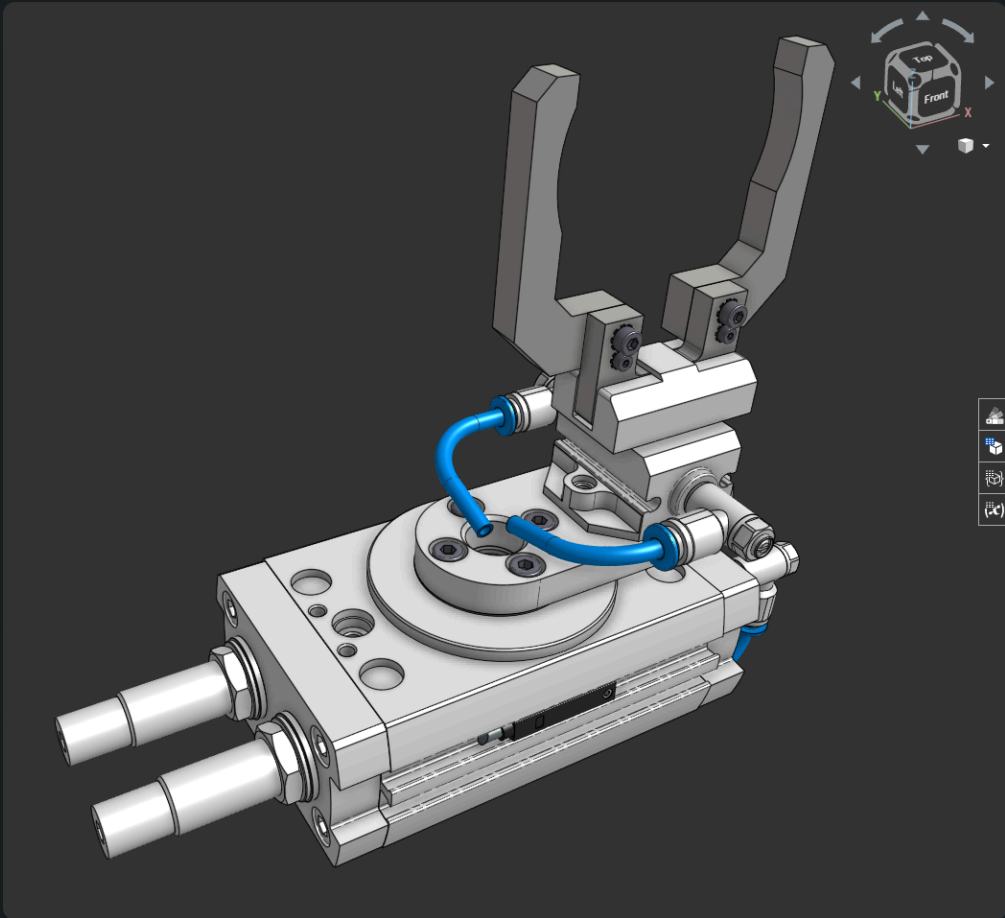
Every project follows its own unique path. Instead of a rigid, one-size-fits-all process, I use a flexible framework of stages that can be added, removed or re-ordered to fit the job.

- General CAD
- Concept Development
- Research & Equipment Development
- Simple Product Development
- Complex Product Development

Explore project types →

Modern Tools

You get in-browser reviews, controlled revisions, a single shared space for files and comments, enterprise grade security and resilient continuous backups.



- Faster Feedback:** Open the live model in the browser and comment directly.
- Version Control:** All changes are version controlled, so we can revert at any time.
- Shared Space:** All project data lives in a secure, shared space.
- Explore Freely:** Branching and merging allows exploration of multiple design ideas, simultaneously.
- Secure & Resilient:** Enterprise-grade security and continuous backups.

Onshape is my preferred software for creating 3D models. I'm also experienced with SolidWorks, Creo, and Inventor, and can usually work in whichever CAD tool your project needs.

Review CAD in the browser →

Previous Career Snapshots

- TTP** Electro-mechanical systems for life science
Mechanical engineering consultant delivering electromechanical solutions for life-science instruments. I worked hands-on across optics, thermal control, pneumatics, and microfluidics, from CAD and analysis to prototype build and test. Tools included Onshape, Creo, SolidWorks, and Python for modelling and control.
- Blacktrace** Scientific and laboratory equipment
- AXISCADES** CAE/FEA
- Intelligent Energy** Fuel-cell modules
- Terex** Quarry equipment

Approach

- Do less, do it better.
- Keep it simple.
- Prototype early, fail fast, learn quickly.

Qualifications and Training

- 15+ Years in Technical Product Development and Consulting
- Chartered Mechanical Engineer (CEng, MIMechE)
- MEng, Mechanical Engineering (1st)
- MSc, Intelligent Systems & Robotics (1st)
- PhD, Computer Science (in progress)
- GD&T Training
- Onshape, Solidworks and Creo Training

See my full background →

Let's connect

Whether you want to explore ideas, discuss a project or just chat through possibilities, I'm always open to a conversation.

What are you working on?

Start the conversation

