

# Jake L. Menown

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Active Security Clearance

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## Profile

I am a principal mechanical design engineer with extensive experience in the aerospace industry spanning the full product lifecycle from initial development to validation and sustainment. I have a reputation for producing work that is thorough and on schedule. I have experience leading engineering teams, interfacing with suppliers, and communicating to program leadership. I'm up to speed on industry standard tools and technologies.

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## Professional Experience

### **Pratt & Whitney** (2017-Present, West Palm Beach, FL)

#### Fan Design Architect, F135 ECU program

- Directed four multidisciplinary product teams through development and validation phases
- Planned hardware architecture to meet test objectives and production requirements
- Coordinated with program executives and engine architecture colleagues to raise and resolve design challenges
- Negotiated design requirements with government (F35 Joint Program Office, USAF, NAVAIR)

#### Airfoils Design Lead, F100 and TF33 sustainment

- Led technology development for laser peening which significantly improved damage tolerance on airfoils
- Developed trial hardware and oversaw testing and characterization of equiaxed cast compressor blades
- Collaborated with multiple suppliers to transition hardware manufacturing, reconcile engineering requirements with supplier capabilities and perform first-piece testing and inspections on new hardware
- Worked with USAF personnel at Tinker AFB for inspections of fielded hardware

#### Externals Design Engineer, AETP and GTF Advantage

- Performed concept and detailed design work for mount hardware and plumbing on the Geared Turbofan Advantage upgrade, led a team of three outsource engineers, supported first engine build
- Took part in initial engineering root cause evaluations following the 2018 Beaufort F-35 crash
- Completed AETP externals detailed design work for fan and gearbox hardware, front bearing compartment internal tubes, and instrumentation
- Taught Teamcenter/Unigraphics courses for P&W new hires

### **Belcan Corporation** (2015-2017, West Palm Beach, FL)

- Developed nozzle actuation and fueldraulics hardware on AETP engine for externals preliminary design
- Identified and incorporated cost reductions on P&W's NGPF commercial engines, including sheet metal redesigns to reduce welding and braze and material changes for various externals hardware

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## Skills

- Communication. I have always received compliments on my presentations whether they're to executives, government or military representatives, or narrow technical audiences. I keep information concise, relevant, and engaging to get audiences on board with key conclusions and aligned on proposed courses of action.
- Programming and scripting to automate engineering tasks and process data. I have written about a dozen software tools, some widely used within my working groups, ranging from simple PDF parsing and annotation to Unigraphics extensions for part definition import/export, to code using matrix manipulation and octrees to quickly read and best-fit bulk white light scan data.
- Highly Proficient in Unigraphics (NX) CAD and Teamcenter SLM. Experience with SolidWorks, GOM Inspect, Simcenter analysis. Quick to adopt niche tools such as DOORS requirements management and CAMEO systems modeling as dictated by program needs.
- Design of the full spectrum of compressor hardware from wrought cases and ducts to rotors and airfoils to small machined parts, tubing/plumbing, sheet metal bracketry and weldments.
- Postprocessing and surface treatments: peening, media finishing, plasma sprays, chemical milling.
- Hardware lab work (fatigue & frequency testing, bluelight scanning, x-ray diffraction) and integration of instrumentation in test environments from simple strain gauges to capacitive and eddy current probes.

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## Education

### **Bachelor's Degree in Mechanical Engineering**

*Florida Atlantic University, Boca Raton, FL*