

Josh Grace

Cincinnati, Ohio region | <https://github.com/kkers42> | HyperPLM: <https://hyperplm.com> | WordPress: <https://joshgracecv.wordpress.com/>

SUMMARY

Josh Grace bridges mechanical engineering, software, data, manufacturing, and hands-on fabrication to turn difficult ideas into working systems.

EXPERIENCE

Founder, Owner, and Technical Operator

2019–Present, subject to confirmation from the résumé

Agrifarms LLC

Founded and operated an excavation, drainage, property-service, and winter-operations business while continuing an engineering career.

- Customer estimating
- Project planning
- Scheduling
- Equipment operation
- Excavation and grading
- Drainage systems
- Snow and ice operations
- Material estimation
- Subcontractor coordination
- Billing and reporting
- Equipment troubleshooting
- Welding and repair
- Field decision-making
- Safety and risk management
- Website and software development
- Business operations

Volunteer Pit Crew — Bobsey SR-7 D Sports Racer

2006–2014

SCCA Club Racing

Supported race-weekend preparation, maintenance, inspection, troubleshooting, and paddock operations for a purpose-built D Sports Racing prototype. Worked with the team under time constraints to help prepare and maintain the vehicle throughout club-racing events.

Belcan

ITI

Quest Defense

PROJECTS

HyperPLM — Product Lifecycle Management Built for Motorsports | A lightweight product lifecycle and race-data management platform created for motorsports teams, builders, and small engineering organizations that have outgrown disconnected folders, setup sheets, spreadsheets, and tribal knowledge.

- Parts and part-number management
- Revision tracking
- Assemblies and bills of material

- Recursive BOM structures
- Where-used searches
- CAD file management
- Setup-sheet storage
- Document revision history
- Check-in and check-out
- Release workflows
- Role-based permissions
- Excel exports
- Vehicle configuration tracking
- Race-event and test-event organization

AlphaForgeAI — Machine-Learning and Market-Intelligence Platform | A research and development platform for collecting market data, engineering features, training machine-learning models, validating signals, generating explainers, and presenting actionable market intelligence.

- Python
- Pandas
- XGBoost
- Time-series data
- Feature engineering
- Backtesting
- Forward validation
- Confidence calibration
- Model-promotion gates
- Data pipelines
- REST APIs
- FastAPI
- DuckDB
- Parquet
- SQL
- Cloud Run
- Docker

Contractor Operations Portal — Field Data and Property Management | A mobile-focused, role-based platform created to organize subcontractor operations across winter and green-season property services.

- Admin, manager, and subcontractor roles
- Property records
- Addresses and site information
- Maps and gate codes
- Contract obligations
- Winter operations logs
- Green-service logs
- Time tracking
- Material usage
- Property-level reporting
- Spreadsheet import
- Mobile-friendly interface

Jet Clean Plumbing Website | Client-facing web and business project.

- Requirements discovery
- Brand transition
- Responsive design
- Service positioning
- Mobile calls to action
- SEO fundamentals
- Copywriting

- Performance improvements
- Hosting and deployment
- Customer communication

Self-Hosted Development and Deployment Infrastructure

- Ubuntu Server
- Docker
- Nginx
- Traefik
- n8n
- Cloud Run
- Cloud SQL
- Scheduled services
- Monitoring
- Backups
- Domain and DNS management
- SSL certificates
- Git-based deployment

Additive Manufacturing Lab | Seven years of 3D printing and additive-manufacturing experience.

- Creality Ender 3 Pro
- Modified printers and hot ends
- Bambu Lab H2D
- PLA
- PETG
- Carbon-fiber-filled materials
- Engineering filaments
- Drying and moisture control
- Enclosed printing
- Slicer configuration
- Nozzle and hot-end selection
- Bed adhesion
- Dimensional tuning

BMW E30 Project

Devin SS Aero Concept | Original Devin SS body and modern prototype-inspired aero study.

TECHNICAL SKILLS

Mechanical and aerospace engineering

CAD and product design

Engineering project leadership

Motorsports and race-team experience

Product lifecycle management

Python and full-stack development

Data engineering and machine learning

Cloud infrastructure and deployment

Welding, fabrication, excavation, and practical field work

Seven years of additive manufacturing and 3D printing

Small-business ownership and operations

Siemens NX

Teamcenter

SolidWorks

AutoCAD

Fusion 360
NXOpen
CADIQ
Engineering drawings
Assembly design
Product data
Revision control
Technical documentation
Mechanical design
Tooling design
Aerospace support
Design reviews
Manufacturing support
Root-cause investigation
Configuration management
Product lifecycle workflows
Requirements interpretation
Design for manufacturing
Design for assembly
Cross-functional coordination
Engineering change management
Python
SQL
HTML
CSS
JavaScript
FastAPI
REST APIs
Pandas
PowerShell
WordPress
Git
GitHub
Issue tracking
Requirements definition
Incremental delivery
Agile and Kanban workflows
Testing
Debugging
Logging
API integration
Authentication
Role-based access
Data import and export
Deployment
Documentation
AI-assisted software development
Data acquisition

API ingestion
Data cleaning
Parquet
DuckDB
SQL databases
Time-series data
Pipeline scheduling
Validation
Dashboarding
Reporting
Data modeling
XGBoost
Classification workflows
Feature engineering
Hyperparameter optimization
Walk-forward evaluation
Holdout testing
Confidence thresholds
Calibration
Forward validation
Model promotion criteria
Performance monitoring
LLM-assisted engineering
AI-generated research explainers
Workflow automation
Prompt design
Technical agents
Tool integration
AI-supported coding
Research summarization

HOMEPAGE METRICS

12+ years engineering and project experience; 7 years additive manufacturing and 3D printing; 8 years SCCA volunteer pit-crew experience; 6+ years business ownership and field operations.

AUDIENCE

Engineering and aerospace hiring managers; motorsports teams; software, data, and AI employers; potential consulting clients; product partners and investors; small manufacturers and race shops interested in HyperPLM.