

JOHAAN MANNANAL

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EDUCATION

Purdue University - Bachelor of Science in Data Science
West Lafayette, IN | Sophomore standing through accepted transfer credit
Liberty High School - High School Diploma
Issaquah, WA

Expected May 2029

June 2026

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, SQL
Data & ML: pandas, NumPy, scikit-learn, FastF1, Plotly, Matplotlib
Web, Automation & Tools: Next.js, React, Node.js, Supabase, Voiceflow, Make, Vapi, Git, Docker, Vercel, pytest

TECHNICAL EXPERIENCE

Midnight - Founder & Product/Engineering Lead Aug 2021-Present
• Led Midnight's rebuild from its earlier beta, whose MVP generated 1,500 registrations and 10M+ social-media views; the refined product is now in active user testing.
• Built grading, quiz generation, spaced-repetition flashcards, tutoring, Canvas integration, and multi-provider AI routing using TypeScript, Next.js, React, Supabase, and Trigger.dev.
• Coordinated 25 contributors during the MVP stage and authored 1,684 of 3,607 commits (~47%) across the rebuilt private codebase.

RESEARCH & PROJECTS

Motorsport Telemetry Analytics - Solo Developer 2026
• Built and deployed an interactive Formula 1 dashboard comparing driver speed, throttle, braking, gears, sector times, tyres, weather, and track position.
• Created a tested Python/FastF1 analysis pipeline and TypeScript/Vite web app with five bundled sessions and local support for sessions from 2018 onward.
• Trained a transparent lap-time model achieving 0.396-second MAE on laps from fully held-out 2023 Monza stints, 46% below a mean-prediction baseline.

Penn State University - Wearable Health ML Research Project Aug 2023-Jul 2026
• Conducted unpublished wearable cardiovascular ML research with Jevelson Simenthy, Instructor of Information Technology at Penn State, using synthetic and Apple Watch data.
• Compared SVM, gradient-boosting, neural-network, and random-forest models; documented findings and rebuilt portions as a reproducible early-stage application with leakage-safe preprocessing, cross-validation, tests, and a model card, reaching 0.925-0.992 F1 on synthetic benchmark tasks.

FIRST Tech Challenge Team 21674 - Software/Mechanical Lead 2022-2024
• Built autonomous-navigation and computer-vision systems in Java using the FTC SDK, OpenCV, TensorFlow, Road Runner, AprilTags, and Android Studio; also contributed to drivetrain design and match strategy.
• Contributed to Liberty High School's FRC program, which qualified for the FIRST Championship three times; the private FTC team competed without a placement.

Praevius - Co-Founder & Technical Operations Lead Aug 2023-Jul 2026
• Co-founded an AI automation agency serving 12 small-business clients and generating more than \$20,000 in revenue.
• Delivered a fully operational website, logo, and business cards for Midnight Garage; built automated outreach systems that helped an SMMA acquire clients and booked a sales call within one week for AVS Marketing.

LEADERSHIP & HONORS

Mentor Me - Co-Founder & Volunteer Tutor Aug 2020-Jul 2026
• Delivered 1,000+ cumulative hours of individualized K-12 mathematics and English tutoring and created personalized lesson plans for different learning and communication needs.
Honors: DECA ICDC Qualifier and 2x State Qualifier | CyberPatriot Platinum Tier (Top 30% of teams)
Interests: Motorsports analytics, Muay Thai, classical and jazz piano