

DYAB ASDI

dyabasdi.com • dyabasdi@gmail.com • [linkedin.com/in/dyab-asdi/](https://www.linkedin.com/in/dyab-asdi/) • github.com/dyabasdi

EDUCATION

The University of Texas at Austin Relevant Coursework: Embedded Systems Design, Data Structures and Algorithms, Data Science for Engineers, Engineering Computation Methods, Dynamic Systems and Controls, Mechatronics, Engineering Statistics
BS, Mechanical Engineering
Controls + Computer Science Track Expected, Aug 2025

WORK EXPERIENCE

Tesla – *Embedded Software Engineering Intern, Chassis Controls, Vehicle Firmware*; Palo Alto, CA Aug 2024 – Present

- Creating Python tests for simulating driving conditions and chassis dynamics, enabling thorough testing of control strategies
- Developing comprehensive unit and integration tests for C-based control algorithms, ensuring robust performance of ECUs
- Defining CAN signal requirements and validating the performance of chassis control algorithms through rigorous simulations
- Performing safety-critical testing and fault injection to confirm chassis control software adheres to ISO-26262 safety goals

Tesla – *Vehicle Test Engineering Intern, Hardware Test Engineering*; Fremont, CA Jan 2024 – June 2024

- Implemented data-driven detection algorithms in firmware using C and CAN to correlate vehicle software with physical events
- Developed unique firmware strategy to detect events on the Tesla Semi and Cybertruck for different vehicle weight configurations
- Automated analysis processes with Python applications to simulate vehicle firmware, reducing validation time by over 50%
- Managed and performed vehicle-level tests on various platforms, working with design stakeholders to iterate new solutions
- Established new test procedures for future platform characterization and to address customer fleet concerns

Trinity Industries – *Product Design & Development Engineering Intern*; Dallas, TX May 2023 – Aug 2023

- Effectively designed brand-new ballast railcar to obtain above average ROI of 16% without compromising design integrity
- Integrated custom electrical, hydraulic, and mechanical systems within the railcar to meet and exceed customer specifications

Tuner Tech, LLC – *Founder*; Southlake, TX Feb 2021 – Present

- Established an LLC with a focus on modernizing older vehicles through the seamless integration of cutting-edge technologies
- Engineered multiple successful products performing product research, design, testing, manufacturing, and sales analysis

PERSONAL PROJECTS

Vehicle Control System, BMW E36 M3 – *Personal Project Car* – github.com/dyabasdi/BMW-E36-Control-Systems

- Developing an all-in-one system to control engine and chassis functions and display parameters with an Arduino and Raspberry Pi
- Creating Python datalogger to send and receive data over CAN and serial communication, generating CSVs for data analysis
- Utilizing PID and PWM control algorithms for traction, throttle, fan speed, fuel pump, idle speed, and boost control

B58 Coil Pack Adapter Kit, Tuner Tech LLC – *Product Development* – dyabasdi.com/?page_id=157

- Created the first-ever M/S5X to B58 Coil Pack Adapter kit, selling \$10,000s worth of kits all over the world

LEADERSHIP EXPERIENCE

Formula SAE - Longhorn Racing – *Heat and Fluids Lead/Powertrain Engineer*; Austin, TX Aug 2021 – May 2023

- Managed a team of automotive engineers to ensure adequate oiling, fueling, and cooling for our engine
- Developed a dry-sump system with custom helical deaeration as a countermeasure to oil starvation issues during hard cornering

iCode Southlake – *Software Engineer and Technical Lead*; Southlake, TX Aug 2018 – Aug 2021

- Led analysis on 5000-family database using Python to create data-driven marketing campaigns, increasing conversion rate by 19%
- Instructed K-12 students in essential programming and soft skills including Object-Oriented Programming using Agile methodology

ADDITIONAL INFORMATION

Technical Skills: Python (Pandas, NumPy/SciPy, Scikit Learn, Matplotlib, PyTest), C/C++, MATLAB, Embedded Systems, Sensor Integration and Calibration, Data Acquisition, Dewesoft DAQ, Vector CANape, Microcontrollers, Vehicle Systems, Git, Jenkins

Soft Skills: Project Management (Jira), Agile, Adaptable, Creative Problem-Solving, Team Leadership, Detail-Oriented, Result-Driven

Certifications: AWS Certified Cloud Practitioner (CLF-C02), Dell Information Storage and Management Foundations 2023, OSHA

Awards: Eagle Scout (BSA); Order of the Arrow (Arapaho Chapter); State Champions (Texas Amateur Hockey Association) – 2018-19; VEX Robotics Worlds; VEX Robotics State Design Award– 2020; Formula SAE International, 10th Place– 2022

Interests: Software Engineering, Automotive Engineering, Test Engineering, Data Science, Track Racing

Work Eligibility: Eligible to work in the U.S. with no restrictions.