Zhangir Siranov

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Experience

Abbott, Systems Engineering CO-OP

- Contributed to the testing and refinement of next-gen LVAD and cardiac support devices, integrating electromechanical fixture design.
- Participated in human factor studies involving both clinicians and patients to inform usability, safety, and product interaction improvements.
- Designed and built multifunctional fixtures for device and battery testing with relays, sensors, and automated logging systems.
- Created and maintained formal test protocols and documentation in compliance with FDA standards and internal quality systems.
- Wrote Python scripts to automate data processing, reducing reporting time by over 50%. • Presented technical progress and recommendations to cross-functional teams; awarded 3 Excellence Awards for pioneering and innitiative.

Pacific Solar Car Project, Systems & Controls Lead

- Jan 2022 Present • Led controls development for a competitive electric vehicle project, fusing embedded software, battery design, and mechanical fabrication.
- Designed and programmed dashboard telemetry and data logging systems.
- Engineered battery and steering systems while managing costs and sponsor constraints.
- Took part in mold/body fabrication using composites; used various manufacturing methods to fabricate metal and plastic parts.

Vkleyka.kz, Lead Mobile App Developer

- Spearheaded mobile app development for a visa processing startup, growing customer base 3x through intuitive UX and efficient backend.
- Defined architecture, managed team coordination, and oversaw user data collection analytics.
- Launched public release and improved conversion rate via feedback-driven iteration.

Pacific Technology, Web Developer I

- Upgraded frontend/backend code for university systems, improving site responsiveness and accessibility.
- Managed components in a Drupal-based site; resolved layout and logic issues for multiple departments.

Kerneu Robotics, Robotics Instructor

- Developed and delivered robotics training for 80+ students aged 10–16, using Arduino, sensors, and C++/RobotC-based coding challenges.
- Wrote curriculum modules introducing electromechanical design and control theory.

Projects

PYTH, Remote Campus Tours Robot	2025
 Built a GPS and LiDAR guided robot to give autonomous campus tours, demonstrating skills in ROS, embedded control, and real-tim Designed to help prospective out-of-state students and parents experience a live feel of the UOP campus remotely. 	e systems.
• Supported both remote manual control and autonomous waypoint tracking.	
Inverted Pendulum Stabilization	2025
 Created a dynamic control system to stabilize an inverted pendulum on a moving cart using real-time feedback and PID tuning. Programmed and tested control loops with visualized live sensor input. 	
Yenbek, Task Planner App for Overthinkers	2024
Designed a gamified task manager for users with ADHD to fight executive dysfunction; built with Flutter/Node.js and Firebase.Deployed app with live updates, integrated rewards system, and analytics.	
Electromechanical Test Fixture, Abbott	2024
 Developed a scalable testing platform for product validation; fixture included relay switching and automated result logging. Fixture passed review for production use with 50+ units planned. 	
Battery Pack, Solar Car Project	2024
 Designed and validated a 400-cell battery pack for an electric vehicle; applied heat transfer modeling and modular design principles. Engineered mounts, busbars, ventilation, and accessible connections. 	
Tayau, Order Platform for Small Businesses in Kazakhstan	2023
 Created an e-commerce storefront builder that empowered 20+ Kazakh stores to accept online orders and streamline logistics. Delivered over 50 initial orders; designed backend with payment workflows. 	
H2O Hackathon, Golden Spigot Award	2022
 Led winning team in civic tech competition; app tracked water pollution and incentivized community cleanup efforts. Awarded for innovation, usability, and environmental impact. 	
Pride Time, Academic Schedule Visualizer	2021
 Developed scraper and interface to streamline university schedule navigation, saving time for incoming students. Reached 50+ users and reduced friction vs. official scheduling tools. 	

Skills

Mechanical: SolidWorks, OnShape, AutoCAD, Fusion 360, CNC, 3D Printing **Programming:** Flutter, Python, C++, JavaScript, Node.js, Matlab Robotics: ROS, Arduino, Raspberry Pi, VEX, FIRST, PLCs, Ladder Logic Tools: Git, Firebase, Figma, Drupal Languages: English (Professional), Kazakh (Native), Russian (Native)

Education

University of the Pacific Overall GPA: 3.71 · Math GPA: 3.9

2021 – 2025 B.S. Mechanical Engineering, Minor: Applied Mathematics

Favorite Courses: Machine Design, Dynamics, Thermo, Heat Transfer, ODEs, Statics, Numerical Analysis, Vector Analysis, Advanced Kinematics

Apr 2022 – Present

May 2023 – Jan 2024

Jan 2024 – Aug 2024

May 2021 - Aug 2022