Andrei Petcu

Project Engineer (US Citizen)

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(949) 295-5000

Lake Forest, United States

divisionbyzorro.github.io/

Aerospace & Mechanical engineer offering extensive project management experience with controls background.

WORK EXPERIENCE

Engineer III

Parker Hannifin, Military Flight Controls

11/2022 – Present

Global Leader in Military Flight Controls

Achievements/Tasks

- Developed conceptual and detailed product specifications by analyzing performance and customer requirements.
- Applied scientific analysis and mathematical models to predict and measure design alternatives' outcome and consequences.
- Contributed to the completion of milestones associated with specific projects. Designed components to meet customer requirements.

Engineering Consultant

11/2022 – Present

Embedded PCB Control Systems

Achievements/Tasks

- Designing PCB based embedded control systems similar to NEST or ECOBEE but for monitoring and controlling pressure and level within large water tanks. Designing, developing and programming new control system.

Sr. Project Engineer

PULSCO Inc.

06/2015 – 11/2022

Solutions for fluid pulsation, noise and water hammer.

Achievements/Tasks

- Analyzed customer's pipelines to provide and design surge/pressure control systems. The systems included an ASME designed pressure vessel with control logic that monitored pressures and water levels. Delivered complete systems with on-site startup and training services.
- Delivered custom relay logic or PLC/HMI based control panels. Panels were designed to operate compressors and monitor water levels in tanks.
- Prior to delivery and startup, all control panels are tested by simulating site conditions. All I/Os are verified and set points are configured to allow for a seamless customer experience.
- Created a program that logs 4-20mA analog signal and plots the data in real time. The program is being sold as a pressure tracking and monitoring device for pipelines that may have problems with high pressures.

SKILLS

Project Management | Pro E/ Creo | Windchill | Solidworks | Solidworks PDM | Mat-Lab | C++ | Python | PLC | Fortran | MS Office | MS Access | Ladder Logic | KY Pipe | Controls | Drones | Injection Molding | PCB Design | AB Micro800 | AB PanelView 800 | LSIS PLC/HMI

PERSONAL PROJECTS

Design, Build and Fly Quadcopter (01/2017 – 06/2017)

- Drone was designed and built using a 32- bit flight controller, 2.4 Ghz PPM remote control, 5.8 Ghz video tx/rx, 2 axis gimbal for stabilized video, 1080p camera, heads up display that displays telemetry, altitude, direction and battery life. Successfully flew drone with an estimated battery life of 15 minutes. Drone can hold altitude, position and angle using onboard controls.

Co-Author of "Island of Stability" (01/2014 – 01/2015)

- Co-wrote a 500 page science fiction novel and self published on Amazon.

EDUCATION

Masters of Science in Aerospace Engineering

University of California Irvine

01/2013 – 03/2014

Bachelor of Science in Aerospace and Mechanical Engineering

University of California Irvine

06/2009 – 06/2012

LANGUAGES

English

Native or Bilingual Proficiency

Romanian

Native or Bilingual Proficiency

INTERESTS

Building and Flying Drones | Science Fiction Books | Open Source Software | Programming