

# Luke Kennard / Computer Engineer

Expert team player and creative mind. Looking for work with any technology that is exciting and challenges what I know.

## CATENI, INC.

Engineer

2021 - Present

A small company in the domain of Satellite Guidance and Navigation Control (GNC). Worked across multiple concurrent projects doing a wide variety of tasks.

Model Based Fault Identification and Isolation (MBFII)

- System designed for US Navy's Rapid Innovation Fund (RIF) for use with fault management on satellites
- Helped design mediator app for data flow between vehicle system and MBFII apps
- Implemented fault identification apps on target hardware
- Simulation software on Windows machine interfaced with bare metal and Linux systems acting as vehicle system controllers in demonstration (CSP, payload, etc.)
- Designed fault programs and simulation events to test system

NXTANT

- Implemented functionality of NXTANT system, composed of NXTRAC proprietary accelerometers and Cateni-designed control board
- Xilinx SoC architecture running RTOS
- Embedded filesystem managed and interfaced between virtual and flash memory
- Validated with real-time navigation algorithm to estimate body states (pos, vel, alpha, omega, etc.)

Satellite Apps & Simulations

- Maintained and updated collection of apps for use with various satellites and simulations across Linux and Windows operating systems, supplemented proprietary software for client projects

Performed General IT Duties

- Created and managed office VPN for remote access during COVID-19 Pandemic

## SAN DIEGO STATE UNIVERSITY

B.S. Computer Engineering

2017 - 2021

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/ C / C++ / C#  
/ Java / JavaScript  
/ HTML / CSS  
/ Bash / cmake  
/ SQL  
/ XML / YAML  
/ Assembly  
/ Verilog HDL  
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/ **Skills**  
/   
/ Embedded Systems  
/ Circuit Analysis  
/ Windows Architecture  
/ Linux Programming  
/ Networking  
/ PCB Design & Assembly  
/ Microprocessor Design  
/ Mathematics  
/ Web Design  
/ Creative Writing / Branding  
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