Lucas Premuda

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Portfolio Website: https://www.lucasis.live
LinkedIn: https://www.linkedin.com/in/lucas-premuda-151b1a65/

Job Objective

A full-time position as a front-end and/or back-end developer where I can apply my software and web development skills and utilize my engineering mindset to help the company meet critical design milestones and production efforts.

Education

University of California, Santa Barbara | B.S. Mechanical Engineering | Degree Earned Jun. 2013

Web Development Experience

Node.js	Express.js	React.js	Material UI
React Bootstrap	Firebase	MongoDB	Mongoose.js
EJS	HTML5	CSS3	Javascript ES6
Java	Spring	PostgreSQL	

Other Programming Languages and Software Experience

Python	MATLAB	C	Bash Scripting
Git/Github	LabVIEW		

Work Experience

Teledyne FLIR (was FLIR Systems)

Systems Engineer	Feb. 2021 – Present
Software/Systems Applications Engineer	Sep. 2019 – Feb. 2021
Test/Systems Engineer	Jan. 2018 – Sep. 2019

Lockheed Martin Missiles and Fire Control (MFC), Santa Barbara Focalplane

Systems Engineer	Aug. 2017 – Jan. 2018
Test Engineer	Jan. 2015 – Aug. 2017
Manufacturing Process Engineer	Aug. 2013 – Dec. 2014
Manufacturing Process Engineering Intern	Dec. 2012 – Aug. 2013

Inovati

Materials/Mechanical Engineering Intern	Jun. 2011 – Sep. 2012

Web Development Projects

Portfolio Website

Portfolio Link: lucasis.live/#project3
Github Link: https://github.com/lpremuda/personal-website-fullstack
Demo Link: lucasis.live

- Full-stack personal portfolio website (front-end intensive with light back-end)
- Express app on back-end routes POST requests from contact form, handle email transport, and serve static files built by create-react-app

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- Deployed to Heroku using Node.js buildpack. Heroku Node.js buildpack starts Express server and initiates create-react-app build command, which creates static files to serve
- Material UI framework used to expedite styling and CSS development

Full-Stack Library App - MongoDB, Express, and Node
Portfolio Link: lucasis.live/#project1
Github Link: https://github.com/lpremuda/YourLibrary
Demo Link: https://your-library.herokuapp.com

- Full-stack MongoDB, Express, and Node app with EJS templating for rendering views
- Node running Express to route incoming requests, perform database queries, and return appropriate responses
- RESTful API for creating, reading, updating, and deleting books and authors per user input
- MongoDB using Mongoose.js to create Author and Book schema and models, as well as database queries. Database deployed with MongoDB Atlas
- EJS Embedded Javascript templating to dynamically create HTML files on server side
- Deployed to Heroku using Node.js buildpack

React Sign-In App with Firebase
Portfolio Link: lucasis.live/#project2
Github Link: https://github.com/lpremuda/react-firebase-auth-app
Demo Link: https://react-firebase-auth-app.herokuapp.com

- React-based sign-in app. User can sign up, log in, recover password, change username, change password, and sign out
- React Bootstrap used to accelerate development to make a simple and concise UI/UX layout
- Firebase Authentication API used to simplify user authentication. Context used to pass user information and Firebase authentication functions. Prevents users that are not signed in from getting to the dashboard page
- Deployed to Heroku using third-party create-react-app buildpack

Engineering Responsibilities/Projects

Systems Engineer (Teledyne FLIR) Feb. 2021 – Present

- System validation and final testing for new infrared camera product
- Established system requirements and validation plan for new sensor-level product

Software/Systems Applications Engineer (Teledyne FLIR) Sep. 2019 – Feb. 2021

- Applications support for camera SDK/API for languages: Python, C#, and C
- Developed Python GUI for ease-of-use camera interfacing
- Worked with high-volume customer to introduce new product part number/configuration to production, ensuring it met custom specifications
- Demonstrating and testing new cameras in development
- Tested and validated new thermal camera to ensure it met the design requirements, provided feedback to systems engineering

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Test/Systems Engineer (Teledyne FLIR) Jan. 2018 – Sep. 2019

- Designed and tested Linux-based security camera with both thermal and visible cameras. Set up production line at FLIR's manufacturing facility in Estonia. Wrote Bash scripts to calibrate and test units.
- System-level radar design and transition to production. Established system requirements, helped set up production line and wrote Bash scripts to test units.
- Provide production and customer support for all production Security products

Systems Engineer (Lockheed Martin) Aug. 2017 – Jan. 2018

- Develop MATLAB code to acquire and process test data according to customer specifications
- Evaluate cameras/sensors to customer specification, determine program acceptability and troubleshoot when necessary. Determine root cause and corrective action when units fail testing
- Provide camera/sensor-level support and troubleshooting to production floor throughout the build
- Model system-level infrared camera performance, including NETD and MTF

Test Engineer (Lockheed Martin) Jan. 2015 – Aug. 2017

- Develop MATLAB code to analyze large amounts of data across thousands of sensors and cameras to characterize cameras and find trends over time
- Automated a time-intensive process (Continuity Test) using National Instruments hardware and MATLAB
- Supported R&D sensor development by testing cameras using MATLAB and demonstrating via data collections of military-type settings
- Set up high-speed test infrastructure for high frame rate sensors (640x512 1000Hz and 1280x1024 360Hz)
- Set up test infrastructure and characterization for large format infrared sensors

Manufacturing Process Engineer (Lockheed Martin) Aug. 2013 – Dec. 2014

- Automated a time-intensive process (Cooler Helium Charging Station) using National Instruments hardware and software (LabVIEW). Developed software for UX/UI, carrying out the process, logging information, and reporting a success or error messages
- Managed CapEx projects for various continuous improvement projects

Leadership Experience

Product Technical Lead (Teledyne FLIR)

- Lead engineering design team to develop infrared sensors and cameras as a systems engineer

Performance Management Team Lead (Lockheed Martin)

- Lead a production team to strive for continuous improvement and meet performance goals
    - Results included >$1M per year in cost savings on major production programs
- Monthly presentations to senior management to communicate progress

Program Technical Lead (Lockheed Martin)

- Lead production support efforts that require collaboration with mechanical, test, systems, electrical, software, quality, and process engineering