About Me

At the time of writing this I’ve coded in 10 different languages, built an IOT greenhouse from scratch and written code for web, mobile, and digital accessories. I have a high level knowledge of JavaScript, focused mainly around web development and the MERN Stack. But, have also built a complete flight data logger and navigation aid with no prior knowledge of the language or device in under a month.

That said, if you dig into my past you’ll quickly see I’ve never been employed as a professional software developer. Programming has been a lifelong obsession of mine, and it’s finally time to turn that obsession into a career.

To make sure my skills were up to date with the latest practices and technologies, I’ve spent the last 18 months completing 40 different online courses. If nothing else, my hope is this demonstrates a commitment to learning and an ability to quickly absorb new material. 2 skills that are undoubtedly crucial to staying on the bleeding edge of technology.

Aside from that, my past as a mechanical engineer can speak for my technical abilities to problem solve and get results. Over the last 11 years I’ve managed a company’s primary product line, created an award winning product from scratch, and when my current company releases their new website, my latest design will be front and center on the landing page.

I have a proven history of being able to take products from ideas to launch, working through tough issues and delivering quality products on time. Please review my resume to further understand my qualifications and contact me at your earliest convenience.

Thank you,

Brad Tudor

Cell: 574-220-7629

**Bradley L. Tudor**

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**QUALIFICATIONS SUMMARY:**

**Full-Stack Developer:** Result-driven Fullstack Developer with experience in MERN stack. Completed projects in Full-Stack Web, IOT, Mobile-Device Accessories, and Automation. Written code in 10 different languages.

**Mechanical Engineer:** 10 years of industry experience successfully leading projects. Specifically in cradle to grave new product development, continuous product improvement, process automation, manufacturing \ support and warranty analysis. Experienced in new employee training \ mentorship. Also extremely proficient in 3d modeling, with good knowledge of FEA, CFD simulation and computer programming.

**SOFTWARE DEVELOPMENT**

**HIGHLIGHTED SKILLS**

Node Express React Redux Apollo GraphQL HTML CSS SCSS MongoDB RabbitMQ Regex RESTful API AWS S3

Jest Enzyme JWT PostMan React Native AJAX HTTP

**EXPERIENCE**

**Full-Stack Developer** June. 2017 – Present

Self-Employed (Torrence, CA)

*Completed Projects:*

* Title: GrowCtrl
  + Description: IOT Automated Greenhouse control and data logger.
  + Involvement: 100% of code base and physical device.
  + Tech Stack: Node, Express, GraphQL Yoga, React, MongoDB
  + Url: <http://growctrl.herokuapp.com/>
  + Git: <https://github.com/Brad-Tudor-Eng/GrowControl>
  + Demo Credentials: *Available on request*
* Title: WingMan
  + Description: In-flight navigational aid for wingsuit pilots Garmin Fenix 3
  + Involvement: 100% of code base.
  + Tech Stack: C-Monkey
  + Git: <https://github.com/Brad-Tudor-Eng/WingMan.git>
* Title: ReSplash
  + Description: UnSplash Clone. Image search with mason style grid layout.
  + Involvement: 100% of code base.
  + Tech Stack: React, SCSS
  + Url: <https://resplash.bradtudor.com/>
  + Git: https://github.com/Brad-Tudor-Eng/ReSplash.git
* Title: Gnar Guides
  + Description: Sample page layout
  + Involvement: 100% of code base.
  + Tech Stack: HTML, SCSS
  + Url: https://gnar-guides.bradtudor.com/
  + Git: <https://github.com/Brad-Tudor-Eng/GnarGuides.git>
* Title: Cam Shaft Reverse Engineering
  + Description: Developed proprietary software to reverse engineer diesel camshafts. Data was taken from a series of linear encoders, processed, then eventually rendered as a 3d-Model in Solidworks
  + Involvement: 100% of code base.
  + Tech Stack: VBA
* Title: CAD Automation for Stewart Filmscreen
  + Description: Programmed API’s, and macros for 3d-CAD automation
  + Tech Stack: VBA, SQL, JavaScript

**MECHANICAL ENGINEERING**

**HIGHLIGHTED SKILLS**

Project management New product development Process Improvement Training and Leadership

Solidworks VBA Programming Rapid Prototyping Plastics Design and Processing

FEA Analysis Metrology CFD Simulation ASME Y14.5-2009 GD&T

**EXPERIENCE**

**Mechanical Engineer** May. 2017 – Present

Stewart Filmscreen (Torrence, CA)

*Responsibilities:* Set Engineering department standards. New Product Development (Consumer Goods). Redesign existing products reducing manufacturing time and cost. Automate Engineering drawing process. Develop costing for all products. Improve manufacturing process efficiency. Advise senior management on corporate improvement projects.

*Achievements:*

* Designed and developed award winning product in less than 3 months.
* Automated process to convert over 5000 CAD files from Inventor 2013 to Solidworks 2017 in less than 2 weeks.
* Reduced Engineering labor though the automation of drawing process and BOM generation saving over $60k.
* Provided accurate cost for current products though development of automated costing templates.
* Spear headed cross functional initiative to get quick-ship program back on track
* Reduced inventory and condensed product line by developing one product to replace 5.

**Product Development Engineer** Sept 2012 – Apr 2017

PAI Industries (Atlanta, GA)

*Responsibilities:* New product design and development (Cast metal, machined, plastic injection molded and composite parts). Foreign and domestic supplier acquisition, and management. Design of new equipment and testing procedures to reduce warranty cost by ensuring product compliance. Research and acquire new capital resources to expand manufacturing capabilities and lower production cost. Design validation through 3D modeling, FEA and CFD simulation. Prototype construction and 3d printing. Engineering data management. Physical product testing. PPAP / FEMA documentation and testing. Developed creative solutions for allowing sales staff to convey technical information simply and cost effectively. Advise senior management on nonconforming products. Audit internal ISO processes. Engineering presentations for improving customer relations. Training and mentorship of engineering staff.

*Achievements:*

* Decreased engineering development time up to 75% though implementation of 3d Laser scanning / employee training.
* Reduced product assembly time by up to 83% through new fixture development.
* Developed, sourced and launched extremely successful high performance product line.
* Cut production cost of HP Pins by 50% though purchase of new equipment with 4 month ROI.
* Created a new system to organize the engineering data, reducing redundant work, lost / duplicate files, and confusion.

**S-Body/Product Engineer** Dec. 2010 – Sept 2012

Supreme Corporation (Goshen, IN)

*Responsibilities:* Set base standards for 70% of the Supreme Corporations’ truck divisions’

product line. Designed and implemented improvements for cost reduction, ease of manufacturing and structural integrity. Provided technical support for sales and

manufacturing at 5 locations nationwide.

*Achievements:*

* Strengthened key support structure by 85% while using 35% less part.
* Diminished total inventory by 45% through development of common parts across product lines.
* Employed improvements in product design resulting in a 20% reduction in fasteners and automation of assembly line.
* Reduced corporate losses by leading engineering changes to correct warranty and manufacturing.
* Boosted sales thought technical support and production of custom designed units on a tight schedule.
* Increased engineering output and corporate profits through training and supervision of new employees.

**Engineering Manager** Feb. 2009 –Dec 2010

Marson International/Quality Fuel Solutions/Pit Stop Products (Elkhart, IN)

*Responsibilities:* Supported manufacturing thought the design, sourcing, assembly and inspection of welding fixtures. Developed coordinates for CNC tubing process. Worked with

Senior Management to develop new products (Automotive and Consumer Goods).

Used 3d CAD to develop engineering documentation. Trained and managed 1 employee.

*Achievements:*

* Improved weld fixture accuracy and inspection procedures though enhanced use of FARO technology.
* Cut weld fixture production cost by reducing assembly time though innovative design.
* Successfully designed, built fixtures for and launched new deck railing system for recreational vehicles.

**Automotive Engineering Internship (Paid)** Dec. 2006 – July 2008

Summit Polymers (Portage, MI)

*Responsibilities:* Worked with project engineers to ensure successful on time development of plastic injection molded and composite products.

*Achievements:*

* Used root cause analysis to effectively solve warranty issues for major automotive companies.
* Reduced design cost by hand building functional prototypes to expedite testing of design changes.
* Successfully met tight prototype delivery deadlines by training and managing teams of up to 8 people.
* Cut production cost though implementation of new corporate design standards.

**EDUCATION**

Bachelors of Science in Engineering, December, 2008

Western Michigan University, Kalamazoo, MI

Associate of Applied Science, May 2006

Southwestern Michigan College, Dowagiac, MI

Solidworks Professional Training in CFD / FEA / Sheet Metal / Weldments

Geomagic Design X Professional Training

Faro Edge Cam 10 Measure 2 Professional Training

**PERSONAL ACHIEVEMENTS**

Graduated from Western Michigan University with honors and highest GPA in major.

Certified Solidworks Professional

NAUI Dive Master Certification

USPA IAD Instructor Certification

**PERSONAL REFERENCES**

**Programmers**

**Marc McDougall**

Kilobyte Studios

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**Managers**

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**Co-Workers**

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**Jim Thelen**

Assembly Manager at PAI Industries

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