

# Damian Kael Green

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## Objective

Pursuing a career change permitting residence local to this nice little town of Cottonwood.

## Work Experience

### Self-Employed

Dec. 2014 – Present	<b>Green House Kratom; Flat Rate Bottles; Clarkdale RV; Green Dingle;</b>	Avondale and Cottonwood, AZ
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*Overview:* Started several small businesses, some successful, some not, at least one is still in development.

- *Green House Kratom* - a business that sold a natural product online. The business started out well, but Federal policy made it too difficult and expensive to import the product legally, thus the business failed. Learn more at [www.GreenHouseKratom.com](http://www.GreenHouseKratom.com)
- *Flat Rate Bottles* - a business that would manufacture and sell bottles that fit well into USPS Flat Rate shipping boxes. A patent was filed and rejected by the USPTO, thus without attaining licensing rights, pursuing the business further would be fruitless. See [www.FlatRateBottles.com](http://www.FlatRateBottles.com) for more.
- *Clarkdale RV* – The most recent venture of owning and operating a small RV Park near old town Cottonwood is thus far a success! See [www.ClarkdaleRV.com](http://www.ClarkdaleRV.com) for more.
- *Green Dingle* – A business specializing in web technology (networks and servers), web development, graphic and 3D design, and limited computer repair; local to Cottonwood and Central AZ. See [www.GreenDingle.com](http://www.GreenDingle.com) for more info.

### Chief Engineer

Dec. 2013 – Nov. 2014	<b>Saunt Associates Inc.</b>	Tempe, AZ
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*Job Function:* To oversee and develop all technical projects pertaining to primarily to three subsidiary companies (Signfire LLC, Intelligrow Analytics LLC, and Reserve Resource LLC).

- *Major Projects:* 1. Developed concept, requirements, and elements of a system incorporating a wide range of environmental data collection sensors (used in indoor farming), a database, and a web portal that would allow clients to monitor the data in various ways and in real time. 2. Used 3D modeling techniques to develop plans for a multi-level, self-contained, pre-manufactured indoor grow-modules. 3. Used 2D modeling techniques to develop numerous architectural floorplans for various large scale grow-facilities including elements of security, lighting, air-handling, egress, operations, and installation of industrial equipment.
- *Networking:* From the ground up, built and maintained the entire office network equipped with multiple internet sources, a load balancer, LAN switching/routing gear, multiple servers, data collection devices, and more.

**Note:** Left on good terms, but am currently prosecuting employer for failure to pay all wages.

## IC Design Engineer

Aug 2012 - June 2013

Intel (contracted by Volt)

Chandler, AZ

*Job Function* (Library group): Incorporate New Characterization Tool for Production.

- *Procedural Design*: Worked with SiliconSmart options and settings in order to establish a procedural flow that would result in the generation of valid liberty models.
- *Automation*: A combination of **perl**, **tcl**, and **shell** scripts were developed to make the SiliconSmart flow productive, reliable, and user independent. Key elements consisted of: setup scripts that gather necessary input information from existing library kits; comprehensive log filtering programs; .lib post processing; and other misc scripts for workarea management, version control, cleanup etc.
- *Validation*: .liberty values, including input pincaps, timing values and constraints, and power measurements, were analyzed in many different ways. In some cases values were compared directly with a reference library; CCS tables required comparison directly with spice models. Special variations of the flow were used to achieve distinct .libs. For example, one contained every possible "when" condition and was used as a reference when examining best/worst case arc selections in simplified production models.

## IC Design Engineer

Jan. 2006 - Apr. 2012

Medtronic

Tempe, AZ

*Job Function*: Standard Digital and IO library development and management. Tasks included:

- *Digital Design*: Created entirely new digital cell libraries to support the latest technologies.
- *Analog Design*: Designed Place-N-Route (PNR) Level Shifters, radiation hardened scan flops, and optimal P-N transistor width ratios for digital cells. Also, analyzed IO/ESD cells when creating characterization models.
- *Verification*:
  - Created special floorplan test cases in Encounter to **PNR** a ring of IO cells around multiple digital seas of various power domains in order to validate cell placement and routability in the design flow.
  - Used Skill code to verify cell database attributes and to abut cell layouts together in exhaustive combinations to prevent DRC issues during PNR.
  - Performed independent timing and power verifications for our liberty file characterization using verilog and spectre/spice simulations.
  - Verified misc. other cell attributes, functionality, syntax, etc. using a combination of Fractal's Crossfire and my own perl scripts.
- *Automation*: Wrote and maintained countless programs for verification and Design Automation (DA) purposes using **perl**/**TK**, **skill**, and occasionally **tcl**, **C++**, **Visual Basic**, etc. Own programs ranged from simple scripts to very complicated GUIs.  
Notable GUIs included one to manage library data in a revision control system; it would identify versions to tag, populate data to a public location, and set symbolic links, all as a super user. Another GUI provided the user a simple way of selecting desired verification checks and would format the resulting error reports in an organized and colorful manner. Another program used a combination of Perl and Skill macros to accomplish the complicated task of creating custom netlists for a library of cells, then performing DRC, LVS, and PEX operations in parallel processes.
- *Communication*: Traveled out of state to showcase recent library developments. Maintained Library Group website where Cell Databooks and verification

	<p>methods were posted. Databooks were generated in HTML using perl scripts as well as Nangate's Liberty Analyzer.</p> <ul style="list-style-type: none"> <li> <b>Familiar EDA tools and file formats:</b> <ul style="list-style-type: none"> <li>Formats: dfii-OA, Liberty, Verilog, Spectre, Spice, CDL netlists, LEF, TCL</li> <li>Cadence: Virtuoso ADE; Encounter; Spectre</li> <li>Synopsys: Design Compiler</li> <li>Mentor Graphics: Calibre, FastScan</li> <li>Atrenta: Spyglass</li> <li>Misc. other: SubVersion, cvs, DesignSync, in-house programs.</li> </ul> </li> <li>Strengths: Automation and analytical skills; quality of work; Creative approach to problem solving.</li> </ul> <p><b>Electrician (apprentice)</b></p> <table border="1" data-bbox="383 552 1421 604"> <tr> <td>June 1996 - June 1997</td> <td>Natl. Trecartin Electric Inc.</td> <td>Hdqts: Anaheim, CA</td> </tr> </table> <ul style="list-style-type: none"> <li>Remodeled electrical aspects of major department stores.</li> <li>Read blueprints, ran conduit, installed lighting, fire, and computer systems etc.</li> </ul> <p><b>Assistant Manager</b></p> <table border="1" data-bbox="383 705 1421 758"> <tr> <td>Jan. 1994 –Aug. 1995</td> <td>Little Caesar's Pizza</td> <td>Glendale, AZ</td> </tr> </table> <ul style="list-style-type: none"> <li>Completed all nightly closing paperwork. Operated registers and counted all monies.</li> <li>Substitute managed several stores.</li> <li>Answered multiple phones, delivered, and, of course, made pizzas.</li> </ul>	June 1996 - June 1997	Natl. Trecartin Electric Inc.	Hdqts: Anaheim, CA	Jan. 1994 –Aug. 1995	Little Caesar's Pizza	Glendale, AZ
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Jan. 1994 –Aug. 1995	Little Caesar's Pizza	Glendale, AZ					
<p><b>Education</b></p>	<p><b>Electrical Engineering: emphasis in IC Electronics Design and Fabrication</b></p> <table border="1" data-bbox="383 926 1421 978"> <tr> <td>1995 - 2002</td> <td>Northern Arizona University</td> <td>Flagstaff, AZ</td> </tr> </table> <ul style="list-style-type: none"> <li>BSEE; GPA ~ 3.2</li> <li>Some classes completed at Glendale Community College</li> </ul>	1995 - 2002	Northern Arizona University	Flagstaff, AZ			
1995 - 2002	Northern Arizona University	Flagstaff, AZ					
<p><b>Skills</b></p>	<p><i>Software:</i> In addition to tools mentioned above: WordPress, PHP, my-SQL, CSS, Gimp, Mentor Graphics layout and simulation software, perl/TK, C++, Assembly, Java, Turbo Pascal, Basic, Matlab, Labsoft, Sketchup, AutoCAD, SunStone PCB development platform, MS Office Products, and more...</p> <p><i>OS's:</i> Linux, Windows, the fundamentals of DOS.</p>						
<p><b>Activities</b></p>	<ul style="list-style-type: none"> <li>President of Pueblo Grande HOA (2009-2010)</li> <li>Member of Maple Ash Neighborhood Association (2009-2010)</li> <li>Student Member of IEEE. (2000-2002)</li> </ul>						
<p><b>Awards Received</b></p>	<p><b>Academic Tuition Waiver</b> (from Northern Arizona University) - based on being in the top 10% from Cactus High School</p>						
<p><b>Interests</b></p>	<p>Camping, Dodgeball, Ballroom Dancing, Mountain Biking, Hiking, Juggling Arts, Gardening, Orienteering.</p>						

## Specialied Classes

Professional electives completed in my field of study:

- **Capstone Design:** Team implementation of a sponsor-accepted proposal culminating in an oral presentation, demonstration, final product, and formal report. Topics included teaming, project control and management, simulation, budget control, negotiations, and implementation.
- **Introduction to VLSI Design:** Design and layout of VLSI circuits using CMOS and BiCMOS system design. Used Computer-Aided Design tools, and practiced design.
- **Integrated Circuits and Device Design:** Advanced topics in semiconductor materials and devices; practical considerations of modern IC technology and manufacturing; simulation tools; design activity.
- **Theory of Semiconductors:** An introduction to the physical electronics of semiconductors, including energy band theory, material doping, and carrier behavior and transport, extended to the operation of some basic semiconductor devices.
- **Transducers and Microsystems:** A background of semiconductor processing and production techniques, including recent developments in sensor and MEMs technology.
- **Electronic Circuits 4:** Analysis and design of linear analog electronic circuits. Models for BJTs, FETs, diodes, operational amplifier midband, high frequency, feedback circuits.
- **Engineering Electromagnetics I:** Static electric and magnetic fields. Applications of static fields. Time-varying electromagnetic fields, applications.
- **Signals, Systems, Filters:** Advanced transient circuit analysis, transfer functions, two-port networks, frequency response, sampling, Fourier analysis, filters and simulation tools.
- **Computer Architecture:** Functional building blocks, examples of architectures, instruction sets, processors, I/O memories, computer busses; introduction to fault tolerance and parallel computing.
- **Microprocessors:** Theory, design, and applications of microprocessors and computer systems; programming techniques for microcomputers; commercial microprocessors and semiconductor memory systems.
- **Software Techniques:** Intermediate computer science, emphasizing algorithm design, object-oriented programming, and data structures, in Java.

## References

(In order of  
pertinence)

- **Mr. Forest Brown** - Principal IC Design Engineer at Medtronic (Library Manager)  
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- **Mr. Parijat Singh** - IC Design Engineer at Intel (Library Specialist)  
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- **Mr. Schuyler Goldfarb** – Project Manager at Saunt Associates (Business Aspects)  
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- **Mr. Blaine Almstrum** - Engineering Manager at Medtronic (IC and Hybrid Layout coordinations)  
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