Doug Starfield

Bellevue, WA
-Email me on Indeed: http://www.indeed.com/r/Doug-Starfield/eee1679eaae07307

• 20+ years experience as a Mechanical Engineer (hands-on HW prototyping, test, and analysis, systems integration), working in a variety of industries including renewable (fuel cell-PEM, Aluminum-Air, Alkaline, and solar-thermal and photovoltaic), aerospace (math modeling/simulation, wind tunnel-all flight regimes, anechoic chamber, instrumentation, and facilities), computer hardware, electronics, industrial process control and instrumentation, and communications (video, data, voice-wired and wireless/rf).

Authorized to work in the US for any employer

Work Experience

Renewable Energy Engineer

Metrol Carbon Ventures LLC - Phoenix, AZ
2017 to Present

Responsibilities
• Under contract as a Hardware R&D Engineer, I've designed, built, and tested small, low power solar-charged electronic devices.

• Presently Involved in hardware R&D (thermal control-commercial kitchen equipment), and also consulting on both greentech/cleantech (fuel cells, batteries, solar, wind, and Hydrogen appliances; H2 Stove, H2 BBQ).

Past Clients included Global Informatics (SmartCard-based, portable electronic medical records system), Unitel (Advanced Physics Device for medical, computer science, and aerospace propulsion systems), WildCharge (wireless solar battery charging). As a sideline activity, I have contracted to perform pre-patent assessments for various university clients.

Contract Mechanical Engineer

Please see the included resume - Seattle, WA
2009 to Present

Clients (chronologically ordered):

Outback Power European Headquarters - Schwabach, DE
2017 to 2017

Renewable Energy Projects Engineer

The Qiyas Group - Riyadh, SA
2014 to 2017

RenovaTech LLC - Seattle, WA
2010 to 2014

WildCharge, Inc - Boulder, CO

2009 to 2010

Mechanical Engineer

Global Informatics - Costa Mesa, CA
January 2008 to January 2009

As a contract mechanical engineer, I provided technical support (component selection, configuration, BOM) for Global Informatics. The product in development was a portable electronic medical record keeping system (hardware/software). This was a contract project engineering lead position with Global Informatics.

Chief Technology Officer

Pacific Group Companies - Long Beach, CA
December 2002 to December 2007

I was the Chief Technology Officer for Pacific Group Companies; an investment company for five years. I was tasked with analyzing and advising on technology investment-related matters.

Director of Engineering

EcoSoul - Tustin, CA
November 2001 to November 2002

Acted as Director of Engineering for EcoSoul; a non-profit Fuel Cell (educational product)-related company. Did some redesign of the small Regenerative Fuel Cell ("RFC"), set up the production facility, and revamped the RFC's components and its BOM.

Engineering Supervisor

Saudi Oger LLC - Riyadh, SA
September 1999 to September 2001

• Worked in Saudi Arabia at the King Khaled International Airport as an engineering supervisor for Saudi Oger LLC, with 12 technicians under my command.

• It was an operations and maintenance contract. We were charged with maintaining the various systems at the airport (fire safety, runway lighting, water treatment plant et al).

Engineering Software Analyst

Google, Northern Lights
2000 to 2000

• Functioning as an engineering software analyst (test development, requirement analysis, requirement traceability matrix). I was on an engineering team that was responsible for the thermal control flight software for various spacecraft projects. Duties included analysis and validation (independent assessment) of the Developer's software design, code, test plans, test results, and progress thereof. Computer software languages used included ADA, ANSI C, and TCL (Honeywell's Test Control Language for test script construction). Computer software applications used included Matrix-X, MS Office 97, 2000, Adobe Acrobat, PGP, Netscape Navigator, Internet Explorer, and Internet search engines (Google, Northern Lights). Computer operating systems used included MSWindows 95, 98, and NT. Hardware standards, certificates, and protocols included Mil Std 1553B, and ISO-9001.

21st Century Engineering
Sydney, Australia

Thermal Engineer

Hughes Wireless Systems - Germantown, MD
January 1998 to June 1999

• Worked under contract for Hughes Wireless Systems (Germantown, Maryland) as a Thermal Engineer. This involved thermal and structural analysis and design.

• Was a member of a 10-person engineering team at one point in the contract. It was at this contract position that I was first used FlowTherm for the thermal analysis of high volume-produced printed circuit boards and their electronic components.

• Also during this time, my own company (P2 Systems) OEMed and sold a scan (computer-to-tv) converter into the personal computer market. This was much lower volume (1000 pieces/month) than what Hughes Wireless Systems was doing with the PCBs that I performed engineering thermal analyses thereof.

Spacecraft Thermal Controls Engineer

Titan Corporation - San Diego, CA
May 1993 to March 1998

Mechanical Engineer

Power Supply, Prototyping Board
August 1989 to February 1993

Functioning as a mechanical engineer, I was responsible for the design and testing of various battery-powered, laptop computer peripherals. This included hotspot thermal analyses for PCB boards and bulk temperature analyses for enclosures. Collateral duties included pre and post-sales engineering for National Instruments hardware (GPIB) and software (LabView and LabWindows) products for both the mining and manufacturing industries. Projects included the design of a pocket harddrive, a portable, external battery and charger for laptop computers (LongRanger), and a stand-alone charger for a preexisting laptop computer battery design ("StarCharger"). Computer software languages used included ANSI C. Computer software applications included Excel, MS Word, LabView, LabWindows, SwitcherCAD, AutoCAD, and Electronics Workbench. Computer operating systems included Macintosh OS 7.x, MS Windows 3.1, SGI, and Sun. Instrumentation and hardware test equipment included thermocouple, DVM, DMM, Regulated DC Power Supply, Prototyping Board, GPIB, D/A Converter, and Digital Logic Probe. Hardware standards, certifications, and protocols included UL and CSA.

National Instruments Headquarters - Austin, TX
1992 to 1992

Mechanical Engineer

American Technical Services - Eugene, OR
January 1982 to June 1987

• Functioning as a mechanical engineer, was responsible for the design, and development of various fluid and thermoenergy devices (kinematics, fluid dynamics, heat transfer), industrial process control and instrumentation, "P&ID," project management, structural analysis, and CAD.

• Projects included the computer modeling/simulation, and hardware testing of a small hydroelectric energy conversion system ("Hydro-Pneumatic Device"), the stability analysis of an airship. The P&ID for: The renovation of local paper and pulp mills (Weyerhaeuser-Oregon --process control and instrumentation), the expansion of an automobile manufacturer's wastewater treatment plant (Ford-

Fremont, Calif), a solid rocket motor manufacturers automatic casting process, and the design/sizing analysis of a heat exchanger for a metal fence manufacturer's planned waste heat recycling. Computer software applications included AutoCAD, C, Fortran, and Basic.

• Computer operating systems included Macintosh 6.0, MS DOS, and Unix. Instrumentation and hardware test equipment used included DMM, DVM, Thermocouple, DC Power Supply, Piezoelectric Pressure Transducer, IR Temperature-Measurement and Imaging, and PLC.

Certifications and Training Certificates:

NAUI Certified Diver
1976 to 1976

Education

MSc. in Mechanical Engineering
Purdue University - West Lafayette, IN
1987 to 1989

MSc. in Aerospace Engineering
Purdue University - West Lafayette, IN
1979 to 1981

B.Sc. in Aerospace Engineering
University of Southern California - Los Angeles, CA
1975 to 1979

Skills

- Computer Software Languages (Hands-On End User Experience)
- C
- Fortran
- Basic
- Lisp
- Prolog
- Modula-2
- Pascal
- Forth
- Assembler Computer Software Applications (Hands-On End User Experience):
- Zoom
- GotoMeeting
- Comsol
- FlowTherm
- Sauna

- COSMOS/M
- ANSYS (ICEPAK)
- MSC.Marc Mentat
- ANSI C (Compiler)
- Fortran IV (Compiler)
- Common Lisp (Compiler)
- Microsoft Basic (Interpreter, Compiler)
- AutoCAD
- DesignCad
- SwitcherCad
- MS Office
- PageMaker
- PhotoShop
- Maple
- MathCad
- Matlab
- LabWindows
- LabView
- CTRL-C
- Matrix-X
- SLAM
- 8085 Assembler
- Netscape Navigator
- Internet Explorer
- Google
- PGP
- eFax
- CuSeeMe
- Lotus Notes
- Frontpage
- Claris Homepage
- Adobe Acrobat (Reader, Distiller, & Writer)
- SolarSizer
- Electronics Workbench
- EasyCD Creator
- Adobe Premiere
- and Advisor
- Open Office. Computer Operating Systems (Hands-On End User Experience):
- MS-Windows OS 7
- Macintosh OS X

- HP
- Sun
- X-Windows
- SGI
- VAX/VMS
- Unix
- Zenix
- Android
- Linux Instrumentation
- Hardware Tools
- Test Equipment (Hands-On End User Experience):
- Optical Bench
- Front Surface Mirrors
- Concave and Convex Lenses
- A/D&D/A Converters
- Shock Tube
- Communication Busses (Ethernet, RS-232, RS-422/485, USB, and IEEE-488)
- Analog Voltmeter
- Hot-Wire Anemometer
- Piezoelectric Transducer
- Thermocouple
- Handheld Thermal IR-Based Imaging System
- Strain Gage (wire, rosette)
- Manometer
- Pitot-Static Tube
- Venturi Meter
- Photometer
- Water Table
- Holographic and Schlieren Systems
- Bourdon Tube
- McLeod Gauge
- Signal Generator
- Soldering Iron
- DMM
- DVM
- DC Power Supply (L, SM)
- LDV
- Aneroid Barometer
- Laser (gas, ruby rod)
- Spectrum Analyzer

- Bandpass Filter
- Analog/Digital Gauges (P, T) Video Equipment
- O-Scope
- Anechoic Chamber
- Micrometer
- Strip Chart Recorder
- DC-to-AC Inverter
- Prototyping Board
- Solar Power Meter ("Insolation")
- PLC (GE Fanuc Microcontroller)
- Digital Logic Probe
- Torque Wrench
- and Wind Tunnel (subsonic, transonic, supersonic)
- 3D Scanner & Printer
- FLIR
- Glove Box.