

Gerald Spencer

Multi-dimensional mechanical engineer passionate about:
Devops, Engineering management, Fluids, Mechatronics and Thermal design

Education

- 2010-2014** **BSc, Mechanical Engineering W/ USCG License**
California Maritime Academy (Vallejo, CA)
Licensed United State Coast Guard 3rd Assistant Engineer

Experience

- 2013 - Present** **3Scan - Director of Production Engineering**
Oversee a multi-disciplinary agile team of around 15 from hardware to software engineers, and biologists to product specialists to develop a high-resolution/high-throughput 3D medical imaging system.
- Engineering project management from ideation to on-going maintenance
 - High throughput imaging system(s) both mechatronics design and software design
 - Agile methodologies for both hardware and software projects and products
- 2015 - Present** **Flux Foundation - Lead technologist**
- Project management for a small team of roughly 10 artists of various disciplines
- 1/2018 - 9/2018** **Temple Galaxia - Project Manager | Lighting lead**
- Engineering project management between 3 timezones
 - Oversaw a crew of 7 individuals from electrical engineers to artists
 - Development of structures electrical schematic to CA Title 24 standards
 - Lighting design: Custom PCB circuit boards, manufacturing and layout
 - Custom software architecture and compute hardware to control 1200 addressable incandescents light bulbs
- 1/2018 - 9/2018** **Temple 2017 - Lighting lead**
- Development of structures electrical schematic to CA Title 24 standards
 - Automated lighting controls allowed hands-free operation during the event
- 1/2016 - 10/2016** **Black Rock Lighthouse Service - Lighting lead**
- Oversaw an electrical team of 3 individuals
 - Development of structures electrical schematic to CA Title 24 standards

- Fire design: Custom fire effects protocol via GRPC, Linux and network installations
- Lighting design: Custom protocol for DMX over Ethernet to wirelessly modulate Color Kinetix

4/2011 - 4/2013 **Taylor Collaboration - Engineering Intern:**

Orthopedics bio-mechanical testing facility working with the medical industry to redesign and improve total knee and hip replacements

- Validated the improvement of a new method for a tibial tubercle osteotomy
- Designed a test setup to simulate humans striking their hip during falling in normal gait

Technical Experience

Engineering Management

Together we can create something that any individual or single team can imagine!

- **Agile methodologies:** Applied to both software and hardware
- **Project management:** From gantt charts and QFDs to task management and KPIs
- The customer experience is key, dog-fooding is a must
- Have overseen complex multi-disciplinary teams from 2 to 20 engineers

Fluidics Design

A beautifully complex field that has enabled humans to reach the moon, or replace a worn aortic valve.

- **CFD:** Fluent, Solidworks

Mechanical Design

Machinist in my heart. Deep knowledge of kinematics, rapid prototyping, Newtonian mechanics, gears, and standardized materials

- **CAD:** Solidworks, Creo/ProE
- **FEA:** Abaqus, Solidworks, Creo

Software/System Design

Production ready systems should be modular, tested and well documented. Development and Deployments need to be reliable, repeatable and consistently deployed/monitored to ensure there is no drift from code to infrastructure.

Extensive experience with the following:

- **Build systems:** Gradle, Maven, Tox
- **Configuration Management:** Ansible, Puppet, Terraform
- **Development Environments:** AWS Cloud9, Docker, Vagrant
- **Languages:** Bash, C, C++, Groovy, Java, .Net, Python, Scala,
- **Monitoring/Telemetry:** Centralized logging, Elk, Grafana, Prometheus
- **Operating Systems:** At home in linux or windows

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