



## JAMES T SNELL

PROFESSIONAL ENGINEER

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### OBJECTIVE

I love to develop excellent and meaningful devices, products and services. I seek to face interesting unknowns together, with clever & motivated people.

### PERSONALITY

- Self-starter, adaptive and driven
- Comfortable architecting and leading development.
- Very willing to follow excellent leaders
- Life-long exposure entrepreneurial mentality

### BUZZWORD BINGO

Java, Objective-C, C/C++, PHP, Python, Swift3, Javascript, jQuery, Ajax, HTML, CSS, BASH, Geoserver, MySQL, Postgres/PostGIS, Virtualization, svn, git, gitlab, devops, continuous integration, Apache2, nginx, CAD (Fusion 360), VHDL, FPGAs, PCB layout, Agile method, DRY principle

## RECENT EXPERIENCE

### LIDAR SERVICES INTERNATIONAL (LSI) & GASRECON (GRI)

SEPTEMBER 2011 TO PRESENT, FULL-TIME

2017	Design and implementation of tools to improve behind-the-scenes automated reporting (via Slack/MatterMost webhooks). Created a unified (Java) application to handle deployment, config & self-managed updating of cross-platform tools. Continued ownership of all GRI systems and LSI Software. Rapidly designed and implemented an inexpensive precision-logging prototype system towards next-gen aerial data collection requirements.
2016	Created GRI semi-automated pipeline to reduce overhead of incoming field data. Migrated GRI Cloud servers from EC2 to in-house ESX infrastructure. Ported all dev IP from Trac/SVN and in to Gitlab. Replaced my original LSI build system with a gitlab-CI. Autobuilds gained automatic unit test reports. Data processing and handling support for GRI field operations, fed back in to development priorities.
2015	Rapid iterative GRI R&D, continued from 2014. Architected and owned Roll-out of Cloud services (leveraged AWS EC2 & S3 for approx. 20 servers). On-the-fly R&D to adapt field systems to shifting needs. Flew data-collection flights for large LSI project in Costa Rica. Became sole on-staff developer for GRI. Co-integration of higher accuracy GPS receivers in to GRI field systems.
2014	Co-developed integration of a new high quality LiDAR scanner to the LSI Matrix platform. Integrated new COTS still-cameras for aerial use. Commenced heavy GRI development. Coordinated through rapid prototyping cycles with 2 other developers. Continued to own DevOps role. Field operations of new GRI platform began. Owned connection between field operations and R&D.
2013	Major Participant from the very start, as LSI created GRI (pipe mapping and CH <sub>4</sub> leak detection). Contributed much to architectural design of backpack sensor platform. Attended nearly all LSI field operations.
2012	Began on-going iterative software R&D for LSI's <i>Matrix</i> platform (data collection system, used in-flight). Founded LSI's DevOps strategy for 2-3 developer team, rigged to scale. Continued field operations role.
2011	Hardware-focused. Installed, flew and field-repaired aerial platforms (Helicopters & Fixed-wing aircraft, for manned flight operations).

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### APP STORE

<https://dawning.ca/apps>

I've recently released a few glorified *hello-world* apps to Apple's App Store. I've especially enjoyed watchOS and macOS dev.

### PERSONAL LAB

I maintain a home environment of Linux and BSD servers. I prototype with them and frequently roll-out my findings beyond my lab. I'm a major lover & very seasoned user of all-things Unix.

### 3D PRINTERS

<https://dawning.ca/df>

<https://dawning.ca/cc155>

I was an early adopter of 3D printers. I've built two, one a heavily altered kit, the other from scratch. My printers have various excellent customizations.

### MRI/CT 3D MODELLING

<https://dawning.ca/skulls>

I've processed & printed complex models derived from actual raw MRI data of my nephew's skull. I recently gained access to the Smithsonian's CT scan database for future such projects.

### MORE

<https://jamesnell.com>

<http://linkedin.com/in/jamestsnell>

<https://github.com/docdawning>

<https://dawning.ca/hackaday>

## COLUMBIA COLLEGE CALGARY

APRIL 2009 TO PRESENT, CONTRACTED-BASIS

I've been involved with Columbia since around 1998, where I first worked for them as a kid, cleaning hardware and providing help desk support. In 2009, I founded their Security Services training eLearning platform using Moodle with AWS-hosted LAMP services. Paypal-driven self-enrolled students have attended our online programs in Security Services ever since.

With Columbia's ESX infrastructure, I coordinate all Linux-based services ever since I first established them. This includes an in-house AD-integrated Moodle deployment (separate to the above mentioned) with over 2000 active student & staff accounts.

I have created and deployed various generations of Columbia's public website (upon Wordpress, on self-hosted Linux servers). This includes establishment and coaching of SEO and Social Media advertising campaigns. We recently have outsourced this to an external firm, though I continue to coach the internal and external team members.

## FORMAL EDUCATION & CREDENTIALS

**PROFESSIONAL ENGINEER DESIGNATION (P.ENG),  
LICENSED BY ASSOCIATION OF PROFESSIONAL  
ENGINEERS AND GEOSCIENTISTS OF ALBERTA  
(APEGA), 2015**

**BACHELOR OF SCIENCE IN COMPUTER ENGINEERING,  
UNIVERSITY OF CALGARY, 2010**

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE,  
EMBEDDED SYSTEMS CONCENTRATION,  
UNIVERSITY OF CALGARY, 2010**

## INTERESTS

I'm perpetually working on personal projects aimed to help me gain new skills. Often, methods I explore in my home lab ends up inspiring systems I deploy professionally. I've listed some relevant projects to the left.