Daniel Gnoutcheff

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Diagnostics & debugging

- Tracked down bugs in Linux kernel, HPLIP, wpa_supplicant, lightdm, VolView, and elsewhere.
- Highly commended by Linux kernel developer Tejun Heo (bugzilla.kernel.org #11703 comment 55)

Programming

Experienced in: C, Python, bash shell, Java.

Exposure to: C++, Scheme, MIPS & x86 assembly.

- 4 summer software development internships (inc. Google SoC) plus volunteer & hobbyist experience.

Self-directed training

Always learning. Excellent record with unfamiliar systems.

- Integrated Kerberos network authentication into an in-house LDAP-based accounting system with no prior knowledge of Kerberos, LDAP, or the in-house tooling. (*Virtual U*)
- Tracked down Linux kernel disk driver bug despite no prior experience with kernel or driver programming.
- Corrected performance problems in HPLIP's parallel port driver despite no prior knowledge of parallel ports.

Professional software development

Exposure to: build automation (jhbuild, make, CMake), automated testing (CTest), build servers (CDash), version control (git, RCS).

- Accelerated discovery of platform-specific bugs in VolView by constructing build servers. (*Kitware*)

Open source development

Experienced with public wikis, bug trackers, mailing lists and IRC for collaborative development.

- Invited community feedback during a API redesign. Pruned old API and simplified code in a git branch to kickstart implementation of the new API. (*Google SoC*).
- Produced patches for NetworkManager, HPLIP, wpa_supplicant, and libgnome-desktop.

Client-driven engineering

- Enabled innovative network connection control UIs for GNU/Linux desktops and added support for multi-user & multi-seat workstations by leading the design of the configuration API used in NetworkManager ver. ≥0.9. (*Google SoC*).
- Constructed computational experiments meeting the needs of ongoing academic research. (*comp. research*)
- Salvaged a pile of medical imaging data by devising a usable organizational structure informed by DICOM metadata. (*Kitware*)

GNU/Linux system administration

14 yrs. self-supporting user. *Experienced with:* Kerberos (Heimdal), (Open)LDAP. *Exposure to:* SSH, DNS, NFS(4), Apache, LVM, PAM/NSS, dpkg/APT, Debian admin., etc.

- Deployed graphical workstations featuring secure network login over untrusted links. Upgraded server-side infrastructure as needed to support this. (*Virtual U*)

Mathematical & scientific research

- Proved a novel mathematical result (rare for an undergraduate) revealing the frequency of counterintuitive behavior in a proposed voting system characterization method. (*honors thesis, Union College*)
- Tested an experimental approximation algorithm by constructing a prototype and comparing its output to known-good results. (*comp. research*)

Communication

Effective written English, compelling oral presentations.

- Essay prize winner (Union College 2012)
- Presented at Union College Steinmetz Symposium, summer research seminars, etc. (*Google SoC, comp. researcher*)
- Clear, thorough documentation of research or system infrastructure (*comp. research, Virtual U*)

Education

Union College, Schenectady, NY, USA; **Bachelor of Science in Mathematics** with honors, minor in computer science. **GPA: 3.647** (magna cum laude), NSF STEM scholar. Graduated 2013.

Experience

- **Kitware: research assistant**, medical imaging team, 2012 summer internship
- **Virtual U: system administrator**, Union College student club, part-time volunteer, 2007-2012
- **Google Summer of Code** (SoC), **NetworkManager**, Linux Foundation, mentor: Dan "dcbw" Williams, summer 2010
- **Computational researcher**: Union College undergraduate summer research
  2009 advisor: Prof. William Zwicker (mathematics)
  2008 advisor: Prof. Gary Reich (physics)