Nels John Frazier

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Education

- **University of Wyoming** Laramie, WY
  M.S. in Computer Science; GPA: 4.0 *Aug. 2013 – Aug. 2015*
  - Key Courses: Hydroinformatics, Designing and Building Extreme Scale Applications, Analysis of Algorithms
  - Research
    - Flood Frequency Analysis
    - Data acquisition, manipulation, and work flow

  B.S. in Computer Science; GPA: 3.82 *Aug. 2010 – May. 2013*
  - Key Courses: Algorithms and Data Structures, Systems Programming and Management, Computer Graphics

  B.A. in Mathematics; GPA: 3.82 *Aug. 2010 – May. 2013*
  - Key Courses: Scientific Computing, Mathematical Modeling, Abstract Algebra, Combinatorics

  Involvement
  - **Upsilon Pi Epsilon (UPE)**: President, member
  - **Golden Key Honor Society**: Webmaster, member

Experience

- **CI-Water** Laramie, WY
  Developer/Administrator *July 2012 – Present*
  - Assisting in the development of the ADHydro model
  - Scripting model input data creation using Python, QGIS, and GDAL
  - Research and analyze hydrological properties of watersheds
  - Develop, analyze, and optimize algorithms for modeling hydrological and management processes
  - Administer a small network of Linux (CentOS) workstations

- **Connected Vehicle Initiative** Laramie, WY
  Consultant *Aug. 2014 – July 2015*
  - Developed hardware and software solutions for working with CAN bus data from vehicles
  - Wrote custom Python scripts for validating, manipulating, and analyzing data

Skills

Technologies: Python, C/C++, Android, Java, PHP, MySQL, Perl, HTML, CSS, Regex, Bash Shell Scripting, MPI, OpenMP, CUDA, Haskell, GIT, JSON, XML, SOAP, REST

Computer and OS: Linux/Unix & Windows; OS installations (Single & Dual Boot); Server and Desktop Administration (Linux and Windows); Virtualization; Compiling Software; Assembling/Replacing Hardware

Projects

ADHydro ADHydro is a large-scale, high-resolution, multi-physics, distributed water resources model suitable for operation in a massively parallel computing environment

HydroQGIS: HydroQGIS is a plugin framework for Quantum GIS providing tools and work flows for hydrological research

Research

- **University of Wyoming**
  Flood Peak Scaling in the Rocky Mountains
  - Quantified the scaling relationship between basin characteristics and flood peaks in the Rocky Mountains
  - Publication in progress

  Research Experience for Undergrads, Summer 2012
  - Developed Serial and Parallel model for CO_2 sequestration