

John Wong

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SUMMARY OF QUALIFICATIONS

Broad interdisciplinary computational, programming, coding, and data analytic experiences.
Demonstrated ability in rapidly adopting unfamiliar languages, frameworks, and methodologies.
Exposure to industry technologies and practices such as noSQL solutions and agile development.
Proven track record in tearing down existing code for debugging and performance tune-up.

EDUCATION

University of Colorado at Boulder Ph.D., M.S. Atmospheric and Oceanic Sciences	2008 – 2013
University of Arkansas, Fayetteville M.A., B.S. Physics (Computational); B.S. <i>magna cum laude</i> Mathematics (Applied)	2003 – 2007

TECHNICAL SKILLS

Techniques: Data analytics, machine learning, heuristic optimization, heterogenous architectures
Languages: C/C++, Java, Python, Objective-C, Fortran, Javascript, PHP, *NIX scripting
Frameworks and libraries: OpenCL, MPI, OpenMP, Prototype, Dojo Toolkit
IDEs and tools: vi, Xcode, Instruments; Git
Data formats: XML, JSON, NetCDF, HDF5, GTFS
Miscellaneous: IDL, Matlab; \LaTeX ; MongoDB, SQLs, exposure to Hadoop/Pig, AWS

SELECTED PROJECTS

Nested Regional Climate Model Assisting in the development of a next-generation climate model.	2012
Lightning parameterization at the convective scale Implementing scale-aware lightning parameterization for weather models.	2010
Chemical kinetics with OpenCL (class project) Implemented a Rosenbrock chemistry model with OpenCL across architectures.	2010
Transport of chemicals assessed with models and satellite observation A collaboration between scientists from NCAR, CU, NOAA, & NASA JPL.	2008
Improvement to Matlab code for DNA data analysis (hired position) Vectorized and debugged Matlab codes for processing digital signals.	2007
Web-based application for generating “concept inventory” Built from the ground up a website for hosting, generating, & managing assignments.	2006

SOURCECODE CONTRIBUTIONS

Refactoring of lightning NOx driver — <i>NCAR’s WRF-Chem v3.5</i> Refactoring old implementation and mediating collaborated contributions.	2013
Lightning NOx emission parameterization — <i>NCAR’s WRF-Chem v3.4</i> Implemented lightning NOx emission option for convective-scale simulations.	2011
Online tendency diagnostics — <i>NCAR’s WRF-Chem v3.2</i> Developed module for decoupling tendency diagnostics for chemical species.	2009