Charlie Scherer

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PROFESSIONAL EXPERIENCE

Nebraska Interactive, Lincoln, Nebraska — Sep 2017 – Current

- Web Developer
  - Architected several projects with duties including:
    - Communicating with clients, developers and product owner to help manage scope and requirements, matching these to available time and resources.
    - Engineering to avoid technical debt, freeing resources for new projects.
    - Helping to build user stories and sprints to facilitate multi-developer Agile workflow, reducing roadblocks and maximizing developer utilization to increase velocity.
  - Initiatives:
    - Lead initiatve to dockerize legacy infrastructure, removing bottle neck where only one developer could work on an app at a time and reducing work in progress.
    - Helped design standard operating procedure for git workflows including branching, merging and review policies to facilitate multi-developer Scrum workflow and satisfy audit requirements.
    - Wrote standard operating procedure for managing database changes as migrations in git, reducing deployment errors.
    - Served on Lean Six Sigma process improvement committee to reduce complexity of deploys while respecting existing business and audit requirements.
    - Attended NIC (Nebraska Interactive's parent company) hack-a-thon training on how to convert legacy applications into easier to maintain low code solutions, and lead similar event in Nebraska.
  - Integrated highly heterogenous environment of corporate, government and financial technologies, including the Linux, Windows and IBM Mainframe ecosystems.

Presig, Boulder, Colorado — May 2014 – Sep 2016

- Founder
- Web Developer
- Data Scientist
  - Researched, developed and analyzed machine learning algorithms to filter sales leads from audio data.
  - Managed the database and developed backend code to integrate the algorithms into a Django-based web product including a REST API.
  - Brought working MVP prototype to pilot customer.

University of Colorado-Boulder, Boulder, Colorado — Aug 2009 – May 2016

- Graduate Teaching Assistant, Mathematics Department
  - Instructor for Calculus 1, 2 & 3.
  - Recitation Leader for Calculus 1, Calculus 2 and College Algebra
  - Developed technology for use in my classes (e.g., http://tildesrc.com/polar)

Public Policy Center, Lincoln, Nebraska — May 2009 – Aug 2009; Jul 2010 – Nov 2010

- Research Asssistant
  - Maintained the organization's Drupal based website as well as the Drupal, PHP/MySQL or plain HTML sites of associated non-profits.

University of Nebraska-Lincoln, Lincoln, Nebraska Mathematics Department — Jan 2008 – May 2009

- Recitation Leader & Grader

ISoft Data System, Lincoln, Nebraska — Feb 2006 – Jan 2008

- Developer
  - Developed interfaces and extensions to an inventory management system.
  - Worked in both web (PHP/MySQL) and desktop (Visual Studio C++) contexts.

Center for Avian Cognition, Lincoln, Nebraska — Apr 2006 – Dec 2006

- Research Assistant
  - Maintained C programs controlling apparatuses allowing birds to participate in touch-screen based tests.

TECHNOLOGY

python: Django, numpy, theano.
Java: Grails, groovy, spring, hibernate.
C/C++: Microsoft Visual C++ (for application programming), linux daemons, numeric and computational programming for research.
Javascript: JQuery, React, Progressive Web Apps.
Other Web Development: SQL (MySQL & Oracle), perl, PHP.
Other competencies: git, Docker, standard unix tools: bash, sed, awk, grep, etc.

STRENGTHS

- Extensive experience communicating technical ideas to both experts and non-experts.
- Finds motivation in the opportuntiy for creative problem solving.
- Experience bringing ideas into reality by leveraging theory to get results.
- Driven to keep learning.

EDUCATION

University of Colorado-Boulder, Boulder, Colorado

- Ph.D. in Mathematics — Jan 2011 – May 2016
  - Thesis: Maximal Comparable and Incomparable Sets in Boolean Algebras
  - Adviser: Prof. J. Donald Monk
  - Focus: Boolean Algebras, Cardinal Invariants, Set Theory
- M.A. in Mathematics
  - Focus: Logic, Set Theory, Foundations

Budapest Semesters in Mathematics, Budapest, Hungary — Aug 2007 – Dec 2007

- Semester abroad.

Missouri State, Springfield, Missouri

- Undergraduate Research Experience, Mathematics Department — May 2008 –Aug 2008
  - Project: Project: Zero Divisor Graphs of Local Rings of Order p^6.
  - Supervisor: Prof. Cameron Wickham
  - Focus: Commutative Algebra, Ring Theory, Graph Theory

University of Nebraska-Lincoln, Lincoln, Nebraska — Aug 2005 – May 2009

- B.A. in Mathematics
  - Thesis: Classification of Local Rings of Order p^6.
  - Focus: Commutative Algebra, Ring Theory.
  - Minors in Computer Science and Physics.
  - Graduated with Honors.

INTERESTS

Running, biking, disc golf, playing outside.

[*Resume compiled on 2020-09-22*]