

# Christopher Cope

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## Experience

2013–Present **Programmer Analyst**, *Penn State Hershey College of Medicine*, Hershey, PA.

- Developed multithreaded Python scripts for collecting the hospital's medical record information into a centralized repository where researchers can use standardized ontologies to discover potential cohorts for study.
- Developed an administration tool for the aforementioned scripts using Django.
  - Includes an interface for updating the ontologies as well as doing statistical analysis on most frequently queried terms and historical patient counts for each of the terms.

2007–2013 **Technology Assistant**, *Penn State Hershey Medical Center*, Hershey, PA.

- In 2013, designed and developed Cerberus, a CakePHP authorization and authentication plug-in allowing easy integration with the CoSign secure single sign-on web authentication system and became the team's informal security analyst.
- In 2012, created Clinical Studies Search, a new CakePHP frontend for the Study Information Portal (SIP), replacing the vendor's outdated and insecure version.
- In 2010 through 2011, wrote Lab Manager and Lab Safety Manager for Research Computing.
  - Lab Manager keeps track of who's doing what research in each of the labs in the Cancer Institute. It uses CakePHP and MySQL.
  - Lab Safety Manager keeps track of any safety related information pertaining to each lab at Penn State Hershey. It uses CakePHP and Microsoft SQL Server.
- In 2007 through 2009, developed the new Cancer Research and Administration Database (CRAD), as well as the new Comparative Medicine Database (CompMedDB).
  - CRAD includes a web interface written in Java and JSP, with SQL tying it to an Oracle DB backend and various reports designed with BIRT to query the data.
  - CompMedDB includes a web interface written in Java and JSP, with SQL tying it to a Microsoft SQL Server backend and various reports designed with BIRT to query the data.
  - In 2009, CRAD was redesigned into RAD so that in addition to the Cancer Institute, the Heart and Vascular Institute, as well as the Neuroscience Institute could use it. This redesign involved switching to the CakePHP framework and Microsoft SQL Server database.

2005–2007 **Technology Assistant**, *Penn State Hershey College of Medicine*, Hershey, PA.

- Created a Microsoft Access database with a Microsoft Visual Basic frontend to keep track of participants in a Virtual Lung Navigation study lead by the Pulmonary department.
- Collaborated with various physicians to understand the mechanics behind the study and to test the program, using their feedback to enhance the end product.

## Computer Skills

### Languages

Proficient Python, PHP, Java, JavaScript, SQL, HTML5, and CSS

Familiar Go, Ruby, Perl, Node.js, Scheme, C, C++,  $\text{\LaTeX}$ , JSP, PL/SQL, and Visual Basic

### Software

Database Oracle, SQL Server, MySQL, PostgreSQL, CouchDB, MongoDB, Redis, and SQLite

Tools Git, Ansible, Fabric, Docker

## Education

**Bachelor of Computer Science**, *The Pennsylvania State University*.

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