Christopher M. Sharkey

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Local Address: 304 Beaver Hall, State College, PA 16802 **Permanent Address**: 1 Knoll Lane, Glen Head, NY, 11545

Education

The Pennsylvania State University, University Park, State College, PA Aug. 2013 – May 2017 (Expected)
Bachelor of Science in Toxicology, GPA: 3.51 |Concentrations: Statistics & Information Science Technology

Experience

Information Technology Intern August 2015 – Present
Humana, Enterprise Architecture | *Louisville, KY*
- Working on natural language processing of free text found in medical records and clinical notes
- Researching applications of machine learning in natural language processing
- Researching options for integrating natural language processing frameworks into existing architecture

Undergraduate Research Assistant Jan. 2014 – Present
Penn State, College of Information Science and Technology | *State College, PA*
- Perviously worked on project utilizing computer vision to control humanoid robotic arm.
- Currently working on project creating unmanned aerial vehicles with variable sensor payloads
- Java, C++, Arduino

Undergraduate Research Assistant Jan. 2014 - Present
Penn State, Department of Biochemistry and Molecular Biology | *State College, PA*
- Investigating quadruplexes in the Herpes Simplex Virus genome
- Quadruplexes are unique secondary structures and play possible roles in viral latency
- Investigated assembled genome of HSV strain H193
- Python, R and Linux HPC computing resources

Information Technology Intern May 2015 – August 2015
Humana, Enterprise Data and Analytics | Clinical Data, Louisville KY
- Created web application to monitor the onboarding of new lab connections
- Application assists in collection of HEDIS data
- HEDIS data determines in part the STARs bonus of Humana
- MVC, C#, .NET, Bootstrap, SQL

Web Developer May 2014 – Sept. 2015
Mobium Solutions LLC | *State College, PA*
- Full Stack Web development on Amazon Web Services
- Online solution paired with dedicated hardware to control individual or networks of 3D printers from the internet
- Website: www.mobiumsolutions.com
- MEAN Stack, Amazon Web services

Cofounder September 2015 - Present
Sensico | *State College, PA*
- Startup working on self-service sentiment analysis of event bases social media data
- Currently part of Lion Launch Pad accelerator

Teaching Assistant Fall 2014 & Spring 2015
Penn State, College of Information Science and Technology, University Park, State College, PA
- Sensor and Effector Systems, IST 402
- Instructor John Hill

Student Research Assistant Dec. 2011 – June 2013
Winthrop University Hospital Neuroscience Research Center, Mineola, NY
- Investigated the origins of free iron in the substantia nigra of Parkinson's patients
- Investigated polymerization and aggregation of iron binding dopamine derived Neuromelanin
- Developed novel application of flow cytometry for particle polymerization analytics
- Developed a ferrozine based iron assay

Leadership

Co-Director, *Nittany Data Labs* Sept. 2014 – Present
- Working on food temperature data visualization project with Penn State Food Services
- Starting work on food ordering predictive modeling project with Penn State Food Services
- Starting work on transport optimizing project with Penn State Food Services
- Teaching python, machine learning and full stack web development

President, *Penn State Robotics Club* Sept. 2013 – Present
- Train new members on embedded programing with Arduino
- Management of multiple projects within the club
- Provide technical help to teams as needed

Deputy of Guidance Navigation and Control, *Lunar Lion Team* May. 2014 – Set. 2015
- Aerospace project team, prior Google XPRIZE team
- Lead systems integration on past test craft
- Worked on hardware integration of new components
- Worked on migration to ruggedized RTD flight system

Technology Captain, *Penn State IFC/Panhellenic Dance Marathon* Apr. 2014 – Mar. 2015
- Developed Digital Line Management System
- Managed Bryce Jordan Center at safe population over THON weekend
- THON is largest student run philanthropy in the world

Projects

Predicting Diabetes with Machine Learning September 2015
- Model for identifying if an individual has diabetes
- Tested ability of ZeroR, OneR, Naïve Bayes and C48
- Utilized meta- algorithms including boosting and bagging
- Completed at PennApps hackathon at University of Pennsylvania

Predicting Kidney Disease with Machine Learning July 2015
- Model for identifying if an individual has chronic kidney disease and if so which stage they are in
- Tested ability of ZeroR, OneR, Naïve Bayes and C48
- Achieved 88.4% correct classification by 10 fold cross validation
- Competed at HackHi internal hackathon at Humana

Target advertising using Machine Learning March 2015
- Targeted advertising for Edmunds.com, models built from their data
- Classify user by behavior into class of ad they were most likely to click on
- American Statistical Association Data Fest best overall project and most creative

Developer of Curriculum Jan 2014 – Dec 2014
- Sensor and Effector Systems, IST 402
- Arduino based course on fundamentals of embedded programming and circuitry
- Wiki: https://goo.gl/Myurux

Electronic Medical Data Collection Jan 2014 – Jun 2015
- Mashavu: Integrated Health Solutions
- Built internal circuitry for hand held data collection devices used in Kenya, Africa
- Prototyped devices currently in use

Awards Eagle Scout with Bronze Palms, Recipient of Undergraduate Discovery Grant

Skills C/C++, Perl, Python, Hadoop, Machine Learning, 3D Printing, Bioinformatics, Linux/Unix, LAMP Stack, MEAN Stack

Events Worlds Maker Fair NYC 2014, American Statistical Association Data Fest, Hack Hi, Penn Apps Hackathon 2015, Hack the North 2015, The Data Science Conference 2015

Publications

Engaget Japanese, Work as Undergraduate Research Assistant in College of IST was featured. Sept. 29 2013
url: http://japanese.engadget.com/2014/09/27/world-maker-faire-kinect-leap-motion/