Joseph L. Sheedy

joseph.sheedy@gmail.com

Professional Experience

Saildrone, Alameda, CA

Lead Weather Forecast Engineer, Platform Engineer, 01/2019 – present

Led the weather forecast data team. Reengineered from the ground up several weather forecast systems for orders of magnitude efficiency gains. Implemented scalable Python data services based on chunked gridded array storage in the cloud, processing up to 100GB of data daily while exceeding low latency delivery requirements. Managed Kubernetes deployments. Team lead on Data Pipeline team, leading several major projects from concept to maintenance phase.

Rooster Park, Seattle, WA

Senior Developer, 5/2018 – 12/2018

Full stack developer for a domain specific CMS. Developed infrastructure from the ground up as the first full stack developer in preparation for rapid growth. Automation of AWS services, Python/Flask and React development, general devops work.

Vulcan Inc., Seattle, WA

Senior Software Developer, 10/2015 - 08/2017

Rooster Park, Seattle, WA

Senior Developer, 12/2014 – 10/2015

After a 9 month contract with Rooster Park upgrading the full stack of Sea Around Us, converted to FTE with Vulcan. Major successes include porting an ecological model from VB to Python with functionality, performance, and usability wins. Translated a monolithic ASP.NET web application to Angular.js with a Python REST API during a site redesign. Open sourced work at https://github.com/SeaAroundUs/. Developed a D3js mapping framework from scratch. Developed and integrated a RabbitMQ based message queue and event infrastructure into Domain Awareness System in order to create real-time geospatial analysis and reporting of radio collar data. Developed iOS projects with Python asyncio service support in Objective C, Swift, and Unity/C# for web beacon based localization and high precision augmented reality applications. Developed augmented reality prototypes in Unity3D and Python combining machine vision and a bespoke 3D rendering engine built with numpy and OpenCV.

University of Washington Professional & Continuing Education, Seattle, WA

Instructor, 04/2013 – 06/2015

Part-time instructor for Python 300, the final course in a weekly three quarter professional certification program. Developed curriculum and led classes onsite at UW PCE as well as offsite on a contractual basis.

Velotron Heavy Industries, Seattle, WA

Owner / Developer, 08/2007 - 12/2014

- Developed a Windows8 application in Ember.js / C# .NET utilizing optical gesture and voice recognition
- Numerical weather model output generation and analysis for the wind power industry
- Web services for delivery of geospatial data to user facing mapping tools for the wind power industry
- Developed a distributed Python based infrastructure and code for geospatial data analysis for fisheries
- Architected and developed the full stack of a commercially successful Ruby on Rails video streaming application
- Created and delivered lesson plans for software training in UNIX, Ruby, and Python
- Debugged and deployed a geospatial Plone/Django application for wildlife monitoring
- Provided maintenance services on a production ExpressionEngine site
- Architected, developed, and deployed a distributed telephone system to record stories for web presentation
- Developed a service oriented framework and UI in Ruby for the management of weather model runs
- Developed and shipped iPhone web interfaces for commercial hardware products
- Developed and maintained an ASP.NET MVC 3 + Oracle application for the energy industry
- Architected and developed a geospatial GeoDjango application for managing weather model runs
- Shipped an art project integrating projection, lighting, and sound hardware with Max/MSP, Unity3D, Ableton Live, Python, and node.js web services

ClipCard (formerly OneOcean Corporation), Seattle, WA
Senior Developer, 06/2012 – 03/2014

Senior developer on a team which released several iterations of a distributed Django application for extracting, managing, and presenting metadata from oceanographic and other types of data sets. Interfaced with proprietary systems and formats, integrated cloud services, and developed several distributed task systems.

3TIER, Seattle, WA
Developer / Administrator, 05/2003 – 08/2007

Developed backend, frontend, and middle tier products for the collection, analysis, and presentation of meteorological and hydrological observations and forecast information. Managed a network including large clusters running weather models. Deployed services for bug tracking, version control, and CMS. Introduced industry standard development practices.

Chronotechnic LLC, Seattle, WA
Java developer, 08/2002 – 05/2003

Java development and quality assurance testing for bioinformatics products. Developed front-end and business logic in Swing and scripted hardware controls.

OEone, Gatineau, Quebec
IT Manager / Developer, 02/2001 – 07/2002

Managed infrastructure and developed products. Developed user services, packaged software, version control management, MySQL administration. Developed an automated build system.

Arctic Fox Technology, Fairbanks, AK
President, Consultant, 04/2000 – 02/2001

Founded and provided leadership in technical and business aspects of a cooperative corporation. Developed tools and websites. Onsite IT support. Chief Scientist aboard research cruises for the Digital Observer Project.

Arctic Region Supercomputing Center, Fairbanks, AK
Research Assistant, 02/2000 – 07/2000

Geophysical Institute, Fairbanks, AK
Research Assistant, 08/1998 – 05/2000

Collected and analyzed solar radiation data from the Antarctic. Chief Scientist aboard the *Polar Star* in 2000. Debugged electronics, managed data acquisition infrastructure, and engineered software. Prepared publications and presented the results.

New Mexico Tech, Socorro, NM
Research Technician, 06/1998 – 08/1998, 06/1997 – 09/1997

Operated and maintained a local area network at a high altitude lightning research laboratory. Collected, managed, and analyzed lightning and meteorological data.

University of Washington, Dept. of Atmospheric Sciences, Seattle, WA
Programming Assistant, 01/1998 – 06/1998

Developed and executed a meteorological model in C on a SunOS platform

Research Assistant, 03/1997 – 06/1997

Executed numerical weather models with scripting, FORTRAN, and NCAR graphics

Web Developer, 11/1996 – 03/1997

University of Washington, Seattle, WA
Computer Lab Assistant, 11/1995 – 12/1996

Formal Education

2000: M.S., University of Alaska, Fairbanks, Atmospheric Science
1998: B.S., University of Washington, Atmospheric Science
1998: B.S., University of Washington, Physics

Certifications

2017: Neural Networks and Deep Learning, Coursera

Patents

2017: Augmented reality for enhancing sporting events