

Yuval Boss

COMPUTER SCIENTIST

☎ (207) 951-3244 | ✉ yuval@yuvalboss.com | 🏠 yuvalboss.com | 🌐 [readicculus](https://readicculus.com) | **in** [yuvalboss](https://www.linkedin.com/company/yuvalboss) | 🗣️ English, Hebrew

Education

University of Washington

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

📍 Seattle, WA

2017-2020

North Seattle Community College

PRE-REQS

📍 Seattle, WA

2015-2017

RELEVANT COURSES: SOFTWARE DESIGN & IMPL., DATA STRUCTURES & ALGO., PROGRAMMING LANGUAGES, MACHINE LEARNING, COMPUTER VISION, SECURITY, OS, EMBEDDED SYSTEMS, NETWORKS, CALCULUS, LINEAR ALGEBRA, STATISTICS

Experience

XNOR.AI (Acquired by Apple Inc.)

MACHINE LEARNING RESEARCH INTERN

📍 Fremont, WA

May. 2018 - Dec. 2019

Conducted research with the National Oceanic and Atmospheric Administration (NOAA) and the University of Washington to analyze large scale aerial arctic data of seal and polar bear populations. Designed machine learning models, methods, and tools to enable research of large scale climate impacts, used by the NOAA research community.

- Developed strategies to efficiently train, test, and evaluate models allowing for rapid experimentation.
- Developed methods for overcoming challenges such as large class imbalance, small object size, large image size(4Kx6K), sparse regions of interest, and a required inference speed of 4 frames per second.
- Designed pipeline to improve label quality by refining labels using an ensemble of models.
- Researched and implemented image registration methods to align infrared and electro-optical imagery.
- Developed various metrics for model evaluation specific to the goals of the project.
- My findings aided researchers in understanding the faults and strengths of the aerial surveys leading to improvements in data acquisition.

github.com/readicculus/sealnet github.com/readicculus/noadb

Skyline

SYSTEM ANALYST/INTERN

📍 MacCoss Lab - Seattle, WA

Oct. 2013 - Sept. 2018

Skyline is an open source-source desktop application enabling the creation of many quantitative methods for analyzing the results of mass spectrometer data, it is the most widely used software for mass spectrometer data analysis.

- Developed user facing features in Skyline for large data organization and analytics.
- Built internal tools for aggregating results from nightly test runs on a dozen machines. Developed web tool for browsing historic test results and visualizing various metrics. Additionally notify when anomaly occurs so we can investigate. These tools have greatly benefited the development and long-term robustness of Skyline.
- Built *Passport*, a web app for researchers to visually browse peptide degradation in protein assays created by researchers in the lab.
- Implemented framework for external plugins in Skyline [doi:10.1093/bioinformatics/btu148](https://doi.org/10.1093/bioinformatics/btu148).
- Designed and developed web applications as well as managing corresponding databases for various internal and user facing tools.

github.com/ProteoWizard/pwiz

Projects

XK

In UW's *Intro To Operating Systems*(CSE451) I spent the whole quarter building upon a primitive operating system called XK. Each week we wrote a design document for some new feature we were implementing which I would then implement. Implemented challenging features such as adding processes, fork, COW fork, file system, physical storage formats, dynamic block allocation, and logging for crash safety in disk writes. Through this project we explored writing various system calls, trap error handling, kernel space vs. user space ideologies, and in-depth locking techniques.

yuvalboss.com/xk.zip

yuvalboss.com

My personal website and development sandbox.

- Designed an interactive visual trip report using Google maps API to plot EXIF data from images taken on my motorbike trip across Vietnam.
- Blog post and image galleries using Jade(now Pug) for server side template generation.
- Display my most recently listened to music using the Spotify API and storing data in a PostgreSQL database.

Skills

Languages Java, C, Python, C++, C#, SML, Racket, JavaScript, HTML, CSS
Frameworks TensorFlow, Numpy, PyTorch, Darknet, PostgreSQL, node, D3, LaTeX
Tools Git, SVN, Vim, GDB, JetBrains Suit, Gradle, VSCode, AWS (S3, EC2, Sagemaker)

Interests

⚙️ **Machine Learning**
📷 **Computer Vision**
🏔️ **Rock Climbing**
✈️ **Traveling**