Xiao Wang

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EDUCATION

Master of Science, Oregon Health & Science University   Portland, USA
Bioinformatics and Computational Biomedicine   Sep 2018 – Jun 2020

Honours Bachelor of Science, University of Toronto   Toronto, Canada
Bioinformatics and Computational Biology   Sep 2014 – Jun 2018

TECHNICAL SKILLS

- Languages: Python, R, HTML, CSS, Javascript, SQL, NoSQL, C, Matlab, Java.
- Frameworks: MERN Stack, Django, Gatsby,
- Tools: PyTorch, TensorFlow, Keras, OpenCV, scikit-learn, numpy, pandas, etc.
- Softwares: Figma, Wordpress, Photoshop, Lightroom, Tableau, AutoCAD, SketchUp, Premiere Pro.

RELEVANT EXPERIENCE

Molson Flooring Inc.   Toronto, Canada
Full-Stack Developer   Jan 2021 – Feb 2021

- Prototyped responsive front-end theme with content marketing using Figma.
- Developed responsive front-end with HTML and CSS on Codepen and Implemented on top of WordPress theme.
- Updated all product pages with new images and descriptions.
- Installed reCAPTCHA authentication for the contact form to reduce fraud and spam.
- Fixed SSL certificate and HTTP&HTTPS redirection issues with PHP files on GoDaddy server.
- Installed Google Analytics for data tracking and analysis.
- Increased website loading speed with lazy loading and optimized search engine with Yoast SEO.

Wild Crane Tattoos Inc.   Toronto, Canada
Full-Stack Developer   Nov 2020 – Dec 2020

- Communicated with the client and prototyped front-end with content marketing using Figma.
- Developed and implemented responsive front-end with HTML, CSS, JavaScript, bootstrap using the Django.
- Implemented Microsoft Bing Map on the contact page.
- Configured Simple Mail Transfer Protocol (SMTP) for forms with Google reCAPTCHA to reduce fraud and spam.
- Configured Django development and production setting with HTTP and HTTPS settings.
- Deployed Django Project to Heroku platform.

Omics Data Automation Inc.   Beaverton, USA
Research Intern   Jan 2020 – Oct 2020

- Deep learning-based analysis on histopathology images of lung cancer.
- Adapted academic publication and its computational analysis pipeline in the industry setting.
- Replicated the supervised learning tasks of cancer type classification and gene mutation status prediction on pathology image.
- Preprocessed more than five hundred digital whole-slides pathology image.
- Performed inference and transfer learning on TCGA pre-trained GoogLet-Inception V3 CNN using Providence dataset.
- Improved performance from AUC less than 0.5 to 0.74 by transfer learning.
- Adapted pre-trained InceptionResNetV2 models from Keras application and developed customized python scripts for further transfer learning.

Ontario Institute for Cancer Research   Toronto, Canada
Research Intern | Supervisor: Dr. Jüri Reimand   Sep 2017 – Apr 2018

- Investigated the gene regulatory networks of long non-coding RNAs (lncRNAs) in multiple cancer types.
- Analyzed RNA-Seq dataset from two databases, Pan-Cancer Analysis of Whole Genomes (PCAWG) and The Cancer Genome Atlas (TCGA).
- Identified potential target genes that are statistically significantly correlated with the lncRNA in the tumor type.
- Used rank aggregation technique in R (RobustRankAggreg package) to find target genes of lncRNA that are consistent in multiple tumor types.
- Completed Pathway enrichment analysis using the gProfileR package in R.
- Created enrichment maps with Cytoscape that represent resulting pathways as easily interpretable network diagrams.

University of Toronto   Toronto, Canada
Research Intern | Supervisor: Dr. Alan Moses   May – Aug 2017

- Investigated the human disordered protein.
- Analyzed the quantitative traits for selection in intrinsically disordered proteins/regions (IDP/IDR) with phylogenic comparative method and computational simulations.
- Obtained protein sequences from Ensembl database with customized python program.
- Aligned Multi-species sequences with MUSCLE (Multiple Sequence Comparison by Log-Expectation). Depicted the Alignments visualization using Jalview.
- Obtained the coordinates of disordered regions predicted by DISOPRED3.

TEACHING

Oregon Health & Science University   Portland, USA
Graduate Teaching Assistant   Mar 2020 – Jun 2020
- CS/EE 559/659 Machine Learning.

PUBLICATION

- Submitted: Yi Hu, Zhaozhen Wu, Haitao Tao, Sujie Zhang, Xiao Wang, et al. "Efficacy and safety of anti-PD-1 therapy in combination with PARP inhibitors for patients with advanced solid tumors." Cancer Immunology, Immunotherapy

ADDITIONAL EXPERIENCE

MIT MEDICINE Hackathon   Virtual
COVID19 Challenge, Beat the Pandemic.   Apr 2020

- Addresses themes such as protecting vulnerable populations and supporting the healthcare system. Experienced with collaborations, leaderships and mentorships involved in solving the problem, develop solutions and business models with possible products.

The General Hospital of the People's Liberation Army   Beijing, China
 Oncology Department   Dec 2019

- Shadowed oncologists in inpatient and outpatient setting.
- Assessed the technical challenges and computational solutions to improve the clinical workflow.

Central City Concern Organization   Portland, USA
Old Town Clinics   Nov 2019

- Shadowed occupational therapist treating Insomnia patients.
- Observed the process of patients' data collection and clinical workflow.