

Jiayi M. Sun

A cancer curer by day, a Troll Druid by night.

(206) 947-3326 | monikasun88@gmail.com

web: paladiner.wordpress.com

LinkedIn: [linkedin.com/in/jiayimsun](https://www.linkedin.com/in/jiayimsun)

GitHub: github.com/monikasun88

Experience

Graduate Student

[Baylor College of Medicine](#) | 2010-Present

Integrated multi-platform data from over 100 osteosarcoma patients to elucidate novel biomarkers for early diagnosis of high-risk osteosarcoma patients and novel therapeutic targets

- Streamlined preprocessing pipeline for novel array method through step-by-step evaluation of alternatives
- Designed R/shiny tools for mining and visualizing genomic information, improving ease-of-use and efficiency and accuracy of queries
- Conducted survival analysis using cox proportional hazards models to identify candidate genes used for personalized diagnosis and treatment
- Utilized machine-learning algorithms to identify patterns distinguish disease subtypes
- Identified novel biomarker for osteosarcoma metastasis confirmed with results from lab studies leading to publication

Publications

- Comprehensive genomic characterization of the osteosarcoma genome [Derp, 2015]
- Hypomethylation of FAS leads to higher metastasis in osteosarcoma patients [Derp, 2015]
- Novel somatic and germline mutations in intracranial germ cell tumors [Nature, 2014]

Lead Project Leader

[Paladiner](#) | 2013-Present

Carried team to server first heroic kill of end-game raid boss Lei Shen

Visualized and dissected raid data to improve the skill of the holy paladin community

- Documented and analyzed patch changes as guides for new players, featured in holy paladin community
- Dissected overcomplicated raid boss information, focusing on relevant mechanisms personalized to player types
- Developed R shiny tool using API-esque backend simulating holy paladin healing
- Actively participated in helping new players and offering advice on game forums

Skills

Languages

- R, Python, Java, C#, Matlab

Data/Visualization

- ggplot2, D3, Tableau
- SQL, plyr/reshape
- survival, machine learning, genomics

Other

- Office (Excel, VBA)
- LaTeX
- Raiding, Paladin, Priest
- Chinese

Projects

paladiner.wordpress.com

Statistical analysis and visualizations of data from World of Warcraft raids pertaining to holy paladins

HeroesDB

Decrypting Blizzard MPQ archives files into online tools for optimizing builds and gameplay for Heroes of the Storm

Trading Strategy Optimizer

Mining Trade and Quote minute-level data, implementing financial models to optimize trading strategies

Education

[Baylor College of Medicine](#) | 2010-2015

PhD in Structural and Computational Biology and Molecular Biophysics, 0.00

Thesis: Genomic Characterization of the Osteosarcoma Genome

[Rice University](#) | 2006-2010

Bachelor of Science in Bioengineering, 2.89

Minor in Computational and Applied Math