**Y**

**upu Liang bioinformatics/DATA Science**

liangyupu@me.com

**Bioinformatics Leader**with more than 15 years of experience in bioinformatics workflow development and data analysis in research, clinical and translational research settings. Adept manager skilled in successfully recruiting, mentoring, and leading software engineers, bioinformatics analyst interns and building a productive team. Head-on experience with broad range of current bioinformatics and computational tools, methods and applications. Proven record in collaboration across teams and getting results published.

*Areas of Expertise include:*

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| * Data analysis (array, NGS) | * Bioinformatics tool development | * Testing, QA, Version Control |
| * Workflow/pipeline development * Database: MySQL, NoSQL, Postgres | * R, Python, Java, C++, Perl, and SQL | * Containerization (docker, conda, VM) |
| * Experiment/Protocol Design | * HPC and Cloud computing(AWS, Azure) | * Project Management |

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| **Experience & Notable Contributions** |

**Alexion • Boston, MA • 2022.09-now**

**Head of Data Engineering**

Lead Multimodal data management and integration solution and strength data engineering and architecture effort.

* lead efforts to establish and improve data engineering best practices and workflows.
* Recruiting, mentoring, and managing a team of skilled contractors and employees managing cloud infrastructure, DevOps and data architecture.
* Prototype an integrated FAIR data solution to support multimodal data analysis and ML across Alexion.

**Dana Farber Cancer Institute • Boston, MA • 2022.01-09**

**Group Leader of Profile Platform**

Lead the bioinformatics workflow development of DFCI-BWH precision medicine platform

* Recruit, mange, and mentor bioinformatics engineers.
* Develop, deploy and maintain CLI data analytical workflows for DFCI clinical sequencing.
* Strategize, and coordinate across stakeholders (research informatics operations, pathology informatics team, IS) to support data sharing from Profile (DFCI NGS data).

**Rockefeller University • New York, NY • 2013 - 2021**

**Director of Research Bioinformatics, CCTS**

Created and led the CCTS bioinformatics core. Collaborated with RU’s bioinformatics core on providing bioinformatics support and training. Manage resource and priorities for both internal and external projects.

* Recruit, mange, and mentor bioinformatics engineers, interns and visiting students.
* Develop, deploy and maintain High Throughput data analytical workflows for RNAseq, Single Cell sequencing, CHIPseq, and shRNAseq for translational research.
* Perform and supervise bespoke data analysis, visualization and interpretation of internal and public omic datasets (TCGA, cbioportal,).
* In charge of data sharing (genomic data and phenotype data)
* Provide support and consultation on experiment design, human protocol development
* Coordinate and represent CCTS participation at NIH’s national center for data to health (CD2H)

**Memorial Sloan Kettering Cancer Center • New York, NY • 2007 – 2013**

**Bioinformatics group leader HOPP**

Developed, evaluated and maintained several production pipelines. Set up NIH data sharing SOP.

* Led on testing and benchmarking RNAseq analytical tools.
* Implemented GATK best practice SNP calling pipeline.
* Co-Developed NGS QA/QC pipeline.
* Analyzed and acted as project manager for TCGA CNV data on MSKCC side.
* Maintained SNP Calling pipeline for Sanger sequencing.
* Led development of NIH data sharing SOP.

**Rockefeller University • New York, NY • 2002 - 2007**

**Research bioinformatics Programmer**

* Built pipelines and databases to analyze RU’s microarray data.
* Collaborated with Illumina on developing tools to QC decoding step for bead array.
* Analyzed CHIP-CHIP data.
* Developed Web tools for transcription binding sites prediction and visualization.

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| **Research Support** |

* **AWS in Education Research grant: 06/08/15-06/08/2017 PI**

Explore utilize Cloud Computing into bioinformatics applications of Translational research

* **RU-CCTS Pilot Grant11/06/2015-05/20/2016 Co-PI**

Development of Human Phenotyping system.

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| **Professional development** |

**Basic Project Management 2017**

SCPS, NYU

**Clinical Trials and Translational Research Certificate Program 2016**

CCTS, Rockefeller University

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| **Education** |

**Ph. D in Computer Science 2014**

Graduate Center, CUNY

**Master of Science in Computer Science 2002**

City College of New York, CUNY

**Bachelor of Science in Biochemistry 1998**

Nanjing University

*\*Publications are in a separate FIle*