Vivek Rai

Indian Institute of Technology Kharagpur
Biotechnology, 2012-2017

🌍 vivekiitkgp.github.io   ✉ *vivekrai@iitkgp.ac.in*
🌐 github.com/vivekiitkgp   ☎ *+(91) 801 329 1569*

Development Experience[1]

WIGI, Wikimedia
May 2015–present

– Analyzed raw Wikidata information to visualize gender information across categories, performed statistical analysis and developed the website for showcasing results.
– Assisted in research and community efforts by writing research paper, blog posts, and reviewing reports.

Sequenceserver
Jun 2014–present

– Implemented BLAST+ output parser module, backend data-module in **Ruby**, and designed graphical overview scheme for BLAST hit information using **D3.js**.
– Contributed more than **110 commits** over an year and co-authored the research paper.

Afra
Dec 2014–Jan 2014

– Improved user interface of the gene annotation platform for better visual feedback
– Handled annotation data, introduced multiple sessions sync, and streamlined annotation editing features in backend.

Research Experience

B.Tech thesis
IIT Kharagpur
Aug 2015–present

Bioinformatic analysis of protein knots and their knotting mechanism.

– Investigating the role of structural (e.g. sequences, secondary structures) and functional patterns in knotted proteins and how they may influence the knotting mechanism.(Talk)

Research Intern
MRDG, IISc
May 2015–Jul 2015

Fluorescent labeling and lipid phase dependence study of *E.coli* ClyA toxin.(Report)

– Assessed toxin activity using fluorescence and qualitatively demonstrated a lipid phase dependent kinetic behavior of Cytolysin A; one of the foremost such study of the toxin.

Skills

Areas   Bioinformatics, Systems biology, Computational modeling, Data visualization

Languages   Python (+scipy), Ruby, SQL, JavaScript, R, MATLAB, BASH, C

Tools   GNU/Linux (*nix), Vim, Git, LaTeX

Other

iGEM   Wet lab team member and content writer for the iGEM IIT Kharagpur team.   2015

Hackerrank   Author of tutorial problems for Ruby, Python & Linux section.   2015

en Wikipedia   Experienced editor with over **30** english articles and more than 1600 edits.   2012–2015

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[1]Exhaustive list at GitHub and an online version of resume.