ADITYA BHARADWAJ

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INDUSTRY EXPERIENCE

B12.io, New York City, NY, USA *Tech Lead and User Researcher* **September 2020 – Present**
- Improved user adoption rate for B12's expert task management (to 100%) and B12's feedback (+50% in last 3 months) tools.
- Improved coverage (+50% in last 6 months) and accuracy (+35% in last 6 months) of B12's automated design critic.
- Improved delivery efficiency (4x improvement in last year) by automating rote work.
- Collaborated with multi-stakeholders (designer/copywriters, engineers, product managers, sales team, and customer support) to identify bottlenecks in the delivery pipeline.

B12.io, New York City, NY, USA *Research Intern* **May 2018 – Aug 2018**
- Designed and implemented a novel mixed-initiative quality assurance system for B12's web-design ecosystem.
- Identified 5 core needs for a task management system to support a web-design task by analyzing designers's usage patterns. These findings continue to drive the product map for the expert task management at B12.

PayPal, Chennai, TN, India *Software Engineer Intern, SDE-1, and SDE-2* **June 2013 – May 2015**
- Implemented a scalable Marketplace payouts RESTful API for PayPal partners in MassPay product using Java.
- Implemented a web service for creating customized short URLs for personal payments using NodeJS.
- Reduced the development environment setup time by 2000% by developing an Eclipse-based scaffolding tool that automatically generates a new RESTful API project.
- Developed a lightweight payment platform – "PayPal-in-a-Box", optimized to run on low-level devices like Raspberry Pi to process multi-store payments.
- Awarded best intern award in 2013 for outstanding performance among a group of 25 interns.

ACADEMIC RESEARCH

Virginia Tech, VA, USA *Graduate Research Assistant* **August 2015 – August 2020**
- *FludAI*: Developed a novel deep learning technique for visualizing graph data. **2019 – 2020**
- *Flud*: Developed a serious game that allows novice players to create meaningful visualization of scientific data with the help of automatically generated suggestions. **2017 – 2019**
- *GraphSpace*: Designed and implemented an open-source web-based platform that fosters collaboration among network science research groups. **2016 – 2017**
- Mentored 8 undergraduate students with back-end and front-end development projects as part of Google Summer of Code program for four consecutive years.

EDUCATION

Ph.D. in Computer Science, Virginia Tech, VA, USA **(GPA: 3.91/4.0)** **August 2015 – August 2020**
- Dissertation: *Mixed-initiative methods for following design guidelines in creative tasks*
- Advisors: Dr. Kurt Luther and Dr. T. M. Murali
- Relevant Coursework: Usability Engineering, Information Visualization, Deep Learning, Data Analytics, Urban Computing, Ethics and Professionalism in Data Science, and Data Mining in Large Networks

B.E. (Hons.) in Computer Science, BITS Pilani, India **(GPA: 8.74/10.0)** **July 2009 – May 2013**
- Relevant Coursework: Data Structures & Algorithm, Operating Systems, and Databases Management Systems

TECHNICAL SKILLS

- Languages : Python, JavaScript, HTML, CSS, Latex, Java, C
- HCI Research Methods : Interviewing, Heuristic evaluation, Usability testing, Wireframes, Personas, Prototyping, Surveys, Crowdsourcing
- Data Analytics Tools : TensorFlow, PyTorch, Scikit-learn, Pandas, Keras, ElasticSearch, Kibana

PEER-REVIEWED CONFERENCE AND JOURNAL PAPERS

- **Bharadwaj, A**., Gwizdala, D., Kim, Y., Luther, K. and Murali, T.M. *Flud: a hybrid crowd-algorithm approach for visualizing biological networks*. ACM Transactions on Computer-Human Interaction (TOCHI) 29.1 (2022): 1-53. (Impact factor = 2.351)   **TOCHI 2022**

- **Bharadwaj, A**., Siangliulue, P., Marcus, A. and Luther, K. *Critter: Augmenting Creative Work with Dynamic Checklists, Automated Quality Assurance, and Contextual Reviewer Feedback*. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. ACM. Paper 539, 12 pages. doi:10.1145/3290605.3300769. (Acceptance Rate = 24%)   **CHI 2019**

- Amiri, S. E., Adhikari, B., **Bharadwaj, A.**, and Prakash, B. A. (2018). NetGist: Learning to Generate Task-Based Network Summaries. 2018 IEEE International Conference on Data Mining (ICDM). doi:10.1109/icdm.2018.00101. (Acceptance Rate = 26%)   **ICDM 2018**

- Adhikari, B., Zhang, Y., Amiri, S. E., **Bharadwaj, A.**, and Prakash, B. A. *Propagation-Based Temporal Network Summarization*. IEEE Transactions on Knowledge and Data Engineering, 30(4), 729–742. doi:10.1109/tkde.2017.2776282. (Acceptance Rate = 30%)   **TKDE 2018**

- **Bharadwaj, A.**, Singh, D.P., Ritz, A., Tegge, A.N., Poirel, C.L., Kraikivski, P., Adames, N., Luther, K., Kale, S.D., Peccoud, J., Tyson, J.J., and Murali, T. M. *GraphSpace: Stimulating Interdisciplinary Collaborations in Network Biology*. Bioinformatics. 2017 Jun 13. (Impact Factor = 4.531)   **Bioinformatics Journal 2017**

- Adhikari, B., Zhang, Y., **Bharadwaj, A.**, and Prakash, B. A. *Condensing Temporal Networks using Propagation.* Proceedings of the 2017 SIAM International Conference on Data Mining, 417–425. doi:10.1137/1.9781611974973.47 (Acceptance Rate = 26%)   **ICDM 2017**

- Sam, S. A., Teel, J., Tegge, A. N., **Bharadwaj, A.**, and Murali, T. M. *XTalkDB: a database of signaling pathway crosstalk*. Nucleic Acids Research, 45(D1), D432–D439. doi:10.1093/nar/gkw1037. (Impact Factor = 11.561)
                                                                      Nucleic Acids Research Journal 2016

WORKSHOP PAPERS

- **Bharadwaj, A.**, Gwizdala, D., Yoonjin, K., Luther, K. and Murali, T. M. *Flud: a hybrid crowd-algorithm approach for visualizing biological networks*. Where is the Human? Bridging the Gap Between AI and HCI, Workshop at 2019 Conference on Human Factors in Computing Systems.   **CHI 2019**

- **Bharadwaj, A.**, Law, J., and Murali, T. M. *GraphSpace: Stimulating Interdisciplinary Collaborations in Network Biology*. International Conference on Systems Biology 2017.   **ICSB 2017**

SHORT PRESENTATIONS

- **Bharadwaj, A**., Gwizdala, D., Kim, Y., Luther, K. and Murali, T.M. *Flud: a hybrid crowd-algorithm approach for visualizing biological networks*. BioVis CoSI at Joint 27th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) and 18th European Conference on Computational Biology (ECCB). **BioVis/ISMB 2019**

- **Bharadwaj, A.**, Singh, D.P., Ritz, A., Tegge, A.N., Poirel, C.L., Kraikivski, P., Adames, N., Luther, K., Kale, S.D., Peccoud, J., Tyson, J.J., and Murali, T. M. *GraphSpace: Stimulating Interdisciplinary Collaborations in Network Biology*. 18th Annual Bioinformatics Open Source Conference (BOSC 2017) and Joint 25th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) and 16th European Conference on Computational Biology (ECCB).   **BOSC/ISMB 2017**

DOCTORAL SYMPOSIUM

- **Bharadwaj, A.** *Mixed-initiative methods for following design guidelines in creative tasks*. 7th AAAI Conference on Human Computation and Crowdsourcing 2019.   **HCOMP 2019**

PATENTS

- Vaidyanathan, S., Vohra, N., **Bharadwaj, A.,** and Goel, A., PayPal Inc, 14 Jul 2020. *Shared resource management system*. U.S. Patent No. 10,713,651.   **2020**

PROFESSIONAL ACTIVITIES

- Program Committee for the Web Conference (WWW) 2020, 2021, and 2022
- Program Committee for Creativity & Cognition 2021, 2022
- Associate Chair on the Program Committee for the ACM CHI 2019 Late-Breaking Work (LBW)