Pradyumna Reddy

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SUMMARY

I am now a 4th year Ph.D. at Smart Geometry Group, at University College London. My Ph.D. advisor is Prof. Niloy J. Mitra. Broadly, I am interested in learning structured representations using unsupervised methods. More specifically my work involves using learning based algorithms for analysis of unstructured data like graphs, vector graphics, and 3D data representations in-general.

I completed my B.E Hons Computer Science and Engineering from BITS Pilani Goa, did my undergrad-thesis at Laboratory of Mathematics of Imaging, Psychiatry Neuroimaging Laboratory Harvard Medical School, where I worked with Prof. Yogesh Rathi. After that, I worked as a Statistical Analyst with the Data and Analytics group at Walmart Labs for a couple of years. Following which I joined UCL.

EDUCATION

University College London   London, UK
Ph.D Computational Geometry(Advisor: Niloy J. Mitra, Tobias Ritschel)   *2019 – 2023*

University College London   London, UK
MRes Computational Geometry(Advisor: Niloy J. Mitra)   *2017 – 2018*

Birla Institute of Technology and Science, Pilani   Goa, India
B.E. Hons Computer Science and Engineering   *2011 – 2015*

EXPERIENCE

Research Intern - Creative Intelligence Lab   June 2020 – Sep. 2020
Adobe Research   *London, UK*

- Developed a general-purpose architecture that we use to learn vector graphics parameters in an end-to-end unsupervised way.

Statistical Analyst   Aug. 2015 – Sept. 2017
Walmart Labs   *Bangalore, India*

- Developed a platform on a microservice-based architecture to automate the scaling of analytical processes for the entire Data Analytics division.
- Worked on a project to measure shelf efficiency of items in Walmart assortment. (Estimated increase in revenue because of the delivered solution is 13 billion dollars over 3 years.)
- Worked on measuring the Elasticity of products in the assortment so as to create more effective discounts.

Contract Developer - Bookie project   Mar. 2014 – Aug. 2014
Google Summer of Code

- Selected for the Google Summer of Code program, which has an acceptance rate of less than 5% .
- Worked as a contract developer for the partner organization Bookie, an open-source alternative for the Yahoo acquired startup Delicious.
- Developed bots to monitor social media websites add and automatically fetch the links from third party sites such as Twitter, Pocket, Facebook.

PUBLICATIONS

Pradyumna Reddy, Paul Guerrero, Niloy J Mitra. Search for Concepts: Learning Visual Concepts Using Direct Optimization. **Under Review** .PDF

Pradyumna Reddy, Zhifei Zhang, Matthew Fisher, Hailin Jin, Zhaowen Wang, Niloy J. Mitra. A Multi-Implicit Neural Representation for Fonts. **NeurIPS 2021**

Pradyumna Reddy, Michael Gharbi, Michal Lukáč, Niloy J Mitra. Im2Vec: Synthesizing Vector Graphics without Vector Supervision. **CVPR 2021 Oral Presentation**

Pradyumna Reddy, Paul Guerrero, Matt Fisher, Wilmot Li, Niloy J Mitra. Discovering Pattern Structure Using Differentiable Compositing. **ACM Siggraph Asia 2020**

Moos Hueting, Pradyumna Reddy, Vladimir Kim, Ersin Yumer, Nathan Carr, Niloy Mitra. SeeThrough: Finding Chairs in Heavily Occluded Indoor Scene Images | Oral presentation. **3DV 2018**

Pradyumna Reddy, Yogesh Rathi. Joint Multi-Fiber NODDI Parameter Estimation and Tractography Using the Unscented Information Filter. **Frontiers in NeuroScience 2016**

Tanay Choudhary, Saurabh Kulkarni, Pradyumna Reddy. A Braille-based mobile communication and translation glove for deaf-blind people. **ICPC 2015**

Amol Mahurkar*, Ameya Joshi*, Naren Nallapareddy*, Pradyumna Reddy*, Micha Feigin, Achuta Kadambi, Ramesh Raskar. Selective visualization of anomalies in fundus images via sparse and low rank decomposition. **ACM SIGGRAPH 2014 Posters**

REFERENCES

Personal referee

Dr. Michaël Gharbi

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Current Supervisor

Prof. Niloy J. Mitra

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Head of department

Prof. Steve Hailes

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