

# Shariq Farooq Bhat

Deep Learning Researcher, PhD candidate

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[scholar.google.com/citations?user=nGbEcl8AAAAJ](https://scholar.google.com/citations?user=nGbEcl8AAAAJ)

## Highlights

- **Experienced** 6+ years of total work and research experience
- **Highly cited** 700+ citations of my publications
- **Widely Impactful** 2k+ stars on GitHub
- **Extensively adopted** My AI models are used in top GitHub repositories such as Stable Diffusion A1111 (100K+ stars) and ControlNet (25K+ stars)
- **Prestigious affiliations** Adobe Research, Stanford University, Intel, University College London, IISc Bangalore

## Education

- 2021–Present **Ph.D., Computer Science, Visual Computing Centre, KAUST.**
- 2020–2021 **Masters, Computer Science, Visual Computing Centre, KAUST, GPA - 3.92/4.**
- 2014–2018 **B.tech, Electronics & Communication Engineering, National Institute of Technology (NIT), Srinagar, CGPA - 8.912/10, Class rank - 5/76.**

## Experience

- July 2023 – **Research intern, UNIVERSITY COLLEGE LONDON (UCL), London, United Kingdom.**  
September 2023 (3 months)
  - Focus Areas: Generative modeling, Depth Estimation
  - Most proud of: Proposed novel framework for controllable image generation and 3D editing
  - Key tech: Python, PyTorch3D, Open3D
- June 2022 – **Research intern, INTEL, Munich, Germany.**  
Nov 2022 (6 months)
  - Focus Areas: Computer Vision, Depth Estimation
  - Most proud of: Proposed novel architecture for depth estimation with 11x improvement over state-of-the-art
  - Key tech: Python, PyTorch
- July 2018 – **Deep Learning Engineer, HARMAN INTERNATIONAL, A Samsung Company, Bangalore.**  
Jan 2020 (1 yr 7 months)
  - Focus Areas: Computer Vision, Natural Language Processing
  - Most proud of: Won Innovation Award within first three months of employment
  - Key tech: Python, PyTorch, Tensorflow, Keras, D3.js
- May 2017 – **Data Scientist, PRAKSHEP, An Agri Startup, Bangalore.**  
June 2018 (1yr 1 month)
  - Focus Areas: GeoSpatial Analysis, Machine Learning, Data Visualization
  - Most proud of: Developed 8+ proprietary algorithms independently
  - Key tech: Python, R, SciPy stack
- Nov 2016 – **Machine Learning Research, INDIAN INSTITUTE OF SCIENCE (IISc), Bangalore.**  
Aug 2017 (1yr 2 months)
  - Focus Areas: Computer Vision; Convolutional Neural Networks, Semantic Segmentation
  - Most proud of: Proposed a deep learning model that outperformed all traditional techniques in road extraction from UAV imagery.
  - Key tech: Python, Tensorflow, Keras

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## First Author Publications

- Title **LooseControl**: *Lifting ControlNet for Generalized Depth Conditioning*  
Shariq Farooq Bhat, Niloy J. Mitra, and Peter Wonka. arXiv preprint
- Description Extended ControlNet and introduced new types of control for 3D-aware image generation and editing. Currently in review.
- Title **ZoeDepth**: *Zero-shot transfer by combining Relative and Metric depth*  
Shariq Farooq Bhat, Reiner Birkel, Diana Wofk, Peter Wonka, and Matthias Muller. arXiv preprint
- Description Achieved state-of-the-art in Depth Estimation with a breakthrough 11x improvement in generalization. Currently in review.
- Title **AdaBins**: *Depth Estimation using Adaptive Bins*  
Shariq Farooq Bhat, Ibraheem Alhashim, and Peter Wonka
- Description Poster acceptance at **CVPR 2021**. Achieved state-of-the-art in Depth Estimation. 10+ derivative/follow-up works. Ranked #1 across several global leaderboards (NYU-Depth-v2, KITTI)
- Title **LocalBins**: *Improving Depth estimation by learning local distributions*  
Shariq Farooq Bhat, Ibraheem Alhashim, and Peter Wonka
- Description Poster acceptance at **ECCV 2022**. Achieved state-of-the-art in Depth Estimation. Ranked #1 across several global leaderboards (NYU-Depth-v2)
- Title **UFCN**: *a fully convolutional neural network for road extraction in RGB imagery acquired by remote sensing from an unmanned aerial vehicle*  
Kestur, Ramesh, Shariq Farooq, Rameen Abdal, Emad Mehraj, Omkar Narasipura, and Meenavathi Mudigere.
- Description Published in Journal of Applied Remote Sensing (JARS), SPIE. Achieved state-of-the-art results in road extraction using proposed UFCN architecture and justified use of UAVs for dense road extraction

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## Other Publications

- Title *Self-Supervised Learning of Domain Invariant Features for Depth Estimation (WACV)*  
Akada, H., Bhat, S.F., Alhashim, I. and Wonka, P., 2022. In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (pp. 3377-3387).
- Title **Sketchgen**: *Generating constrained cad sketches. (NeurIPS)*  
Para, W., Bhat, S., Guerrero, P., Kelly, T., Mitra, N., Guibas, L. J., Wonka, P. (2021). Advances in Neural Information Processing Systems, 34, 5077-5088.
- Title **LLM Blueprint**: *Enabling Text-to-Image Generation with Complex and Detailed Prompts. (In review)*  
Hanan Gani, Shariq Farooq Bhat, Muzammal Naseer, Salman Khan, Peter Wonka
- Title **PatchFusion**: *An End-to-End Tile-Based Framework for High-Resolution Monocular Metric Depth Estimation. (In review)*  
Zhenyu Li, Shariq Farooq Bhat, Peter Wonka

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## Achievements & Awards

- 2018 **Innovation Award**, HARMAN INTERNATIONAL.  
Proposed AI-based gap analysis, effectively cutting down costs for the organization by at least 0.1M USD by the end of the product cycle.
- 2012 **Gold medalist - Mathematical Talent Hunt test**.  
Ranked 1st among 15,000 candidates in the mathematical test involving Aptitude, Calculus, Probability and Statistics
- 2012 **Qualified NSEP 2012**, NATIONAL STANDARD EXAMINATION IN PHYSICS.  
Ranked among top 10%
- 2013 **Ranked 1st in Kashmir Division**, JAMMU KASHMIR COMMON ENTRANCE TEST.  
among 24,000 candidates
- 2014 **Ranked among top 1%**, JEE MAINS.  
Examination had over 1.3 million applicants