Nishanth J. Kumar

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EDUCATION

Brown University   Providence, RI
Sc.B. in Computer Engineering, GPA: 3.94/4.00   2017–2021 (expected)
  – Honors and *magna cum laude* candidate with Thesis expected
  – Activities: Brown Space Engineering, Brown STEAM, Brown CS Meta-Undergrad Research Assistant (MURA)

ACADEMIC EXPERIENCE

Brown University Department of Computer Science   Providence, RI
Undergraduate Research Assistant   2017 - Present
  – Work under Professors Stefanie Tellex, George Konidaris and Michael Littman within the bigAI initiative
  – Research topics include Imitation Learning, Reinforcement Learning, Classical Planning, Model-Based Reasoning, Planning under Uncertainty, and Mixed Reality, among others
  – Research focused on applications to Robotics

Brown University Department of Computer Science   Providence, RI
Meta Undergraduate Research Assistant (MURA)   2020 - Present
  – Responsible for cultivating and promoting Undergraduate Research within the Brown CS Department
  – Hold "Research Office Hours", co-ordinated educational events and research opportunities for undergrads with faculty members

INDUSTRY EXPERIENCE

Uber Advanced Technologies Group   Remote
Summer Research Intern   May - August 2020
  – Research Project on Active Learning under Prof. Raquel Urtasun
  – Explored the use of Active Learning methods to simultaneously improve sample-efficiency and reduce data labelling costs for a neural network model at Uber ATG
  – Conference publication in preparation. Other project details under NDA

Paragon.school   Providence, RI
Co-Founder   February 2020 - Present
  – Paragon.school is a mentorship and college-consulting company for high-performance high school students
  – Focus on mentoring international students to give them opportunities I never had

TEACHING

- **Head Teaching Assistant**, Brown CS   Fall 2019
  Learning and Sequential Decision Making [Grad Level] (CSCI 2951-F)

- **Teaching Assistant** at Brown School of Engineering   Fall 2018
  Honors Introduction to Engineering (ENGN 0031)

Scholarships and Awards

- Barry M. Goldwater Scholarship   2020
- Heidelberg Laureate   2020
- CRA Outstanding Undergraduate Researcher Honorable Mention   2019
- 'Best Plenary Presenter', Ivy-League Undergrad Research Symposium (ILURS)   2019
- Undergraduate Teaching and Research Award, Brown University   2019
- Hack@Brown "Best Hardware Hack"   2018
- YHack "Best Finance Hack"   2017
- Google Global Science Fair Regional Finalist   2015
- FIRST Tech Challenge World Championships, Special Judges' "Enabler" Award   2015

Invited Talks

- *What I'm working on now: Task Scoping and Parameterized Imitation Learning*
  - Short talk at Intelligent Robot Lab meeting, Brown University 2019
- *Building Intelligent, Collaborative Robots*
  - Invited talk at the second Machine Intelligence Conference (MIC), Boston University, 2019
- *Action-Oriented Semantic Maps via Mixed Reality*
  - 1 of 8 Plenary Presenters invited to speak at the Second Ivy League Undergrad Research Symposium, UPenn 2019

Publications

[1] E. Rosen, **N. Kumar**, N. Gopalan, D. Ullman, G. Konidaris, and S. Tellex, "Building plannable representations with mixed reality", in *Proceedings of the 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems*.

[2] **N. Kumar**, "The past and present of imitation learning: A citation chain study", *arXiv preprint arXiv:2001.02328*, 2020.

[3] **N. Kumar**, M. Fishman, N. Danas, S. Tellex, M. Littman, and G. Konidaris, "Task scoping for efficient planning in open worlds (student abstract)", in *Proceedings of the AAAI Conference on Artificial Intelligence*, vol. 34, 2020, pp. 13 845–13 846.

[4] **N. Kumar**, J. Chang, S. Hastings, A. Gokaslan, D. Romeres, D. Jha, D. Nikovski, G. Konidaris, and S. Tellex, "Learning deep parameterized skills from demonstration for re-targetable visuomotor control", *arXiv preprint arXiv:1910.10628, in preparation*, 2019.

[5] A. Wandzel, Y. Oh, M. Fishman, **N. Kumar**, W. L. LS, and S. Tellex, "Multi-object search using object-oriented pomdps", in *2019 International Conference on Robotics and Automation (ICRA)*, IEEE, 2019, pp. 7194–7200.

[6] **N. Kumar**, E. Rosen, and S. Tellex, "Knowledge acquisition for robots through mixed reality head-mounted displays", in *The Second International workshop on Virtual, Augmented and Mixed Reality for Human-Robot Interaction (VAM-HRI)*, 2018.