Qasim Wani

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EDUCATION

B.S. Electrical & Computer Engineering, Specialization: Machine Learning, Graduation: May 2022
Virginia Tech. Blacksburg, VA   **In-Major GPA:** 3.79   **GPA:** 3.69   Dean's List

TECHNICAL SKILLS

Deep Learning	Generative Models	C++	JavaScript	PyTorch
Reinforcement Learning	Node.js, MongoDB	Unix/Linux	Product Strategy	Android (Kotlin)

WORK EXPERIENCE

PathAI (Series C) – Machine Learning Engineer II | *Sept. 2022 - Present*
- Forbes AI Top 50 startup; MLE I to MLE II in **7 months** – fastest promotion in the company.
- Researched novel methodologies in contrastive learning, SSL, GNN, MIL, Multi-Resolution Transformer networks.
- Led the development and optimization of uncertainty quantification – improved time and memory performance by 50%.
- Built tissue models for Celiac disease that generated over $100K in revenue.
- Published paper in DDW; Manuscript (in progress) on spatial transcriptomics for NASH partnered with GSK.

Infinitus Systems (a16z, Kleiner Perkins) – Member of Technical Staff Intern | *May. 2022 – August. 2022*
- Developed auto-labeling tools to accelerate the process of labeling NLP data by 10x.
- Finetuning transformer-based models on OOD data for intent and entity labeling. Released end-to-end API as internal tool.

Qualcomm – Machine Learning Intern (Graduate Position) [Return Offer] | *May. 2021 – August. 2021*
- Quality of Service (QoS) Optimization using spatial-temporal Graph Neural Networks.
- Led the innovation of interpretability driven algorithm that reduces chip simulation debug time from **3-4 weeks** to **1-2 hours.**
- Developed end-to-end ML pipeline using PyTorch. Released API for internal use within Qualcomm.

PERSONAL PROJECTS & ACADEMIC RESEARCH

HitchHiqe | Founder | *May. 2019 – July. 2020*
- Safe and convenient long-distance ridesharing platform for college students.
- **$20,000** acquisition offer for novel end-to-end ML algorithm that reduces ride search time on Facebook by **540x**.
- Funding opportunity from Justin Kan (Twitch founder) and Garry Tan (CEO Y Combinator).
- Implements Computer Vision (GCP Vision API) for authenticating driver's license, recommender system using KNN for recommending users with rides, and NLP algorithms for searching and recommending best rides on Facebook in 2-5 seconds.
- Featured on Fox News, Collegiate Times, MIT, and Virginia Tech - Pamplin College of Business.
- Wrote over 50,000 lines of code under 6 months using JavaScript (Node.js), Python, & MongoDB

Preventiv – Novel Contact Tracing App | *February. 2020 – July. 2020*
- Created and released one of the first Contact Tracing apps available worldwide and made it available for open-source.
- Implemented novel recursive contact tracing algorithm using GCP for dense communities with $O(N)$ time complexity.
- Aided Virginia Tech to implement its contact tracing solution to over 40,000 users.
- Top 10 finalist for Virginia Tech's Tech Together Campaign challenge on contact-tracing and infrastructure innovation.
- Recognized in Health Hotline podcast, Collegiate Times, and VT News.

Robust Representation Learning | Stanford University x Salesforce Research | *March. 2021 – October. 2021*
- Developed MASIW – an ML algorithm for detecting and adapting to out of distribution data.
- Created novel label shift algorithm; paper under review at NeurIPS, the most selective AI conference in the world.
- Improved accuracy on current techniques by **15%** and state-of-the-art label shift algorithms by **7%**.

LeetHub – Top Trending JavaScript Repository, GitHub | *November. 2020*
- Chrome extension that automatically pushes code to GitHub when passing all tests on any coding problem.
- 40K+ users (82% weekly active users) used it over **30 million** times. **150x** speed improvement!
- 3K stars; 1K forks; 3 acquisition offers. Forked version in Korea with 10K users. Led a team of 15 across America & India.

AWARDS

Venture Fellow
Kleiner Perkins (June 2022), 8VC (May 2022), Clear Ventures (April 2023), OnDeck Capital (April 2022), ZFellow (March 2023)

Winner of CityLearn Competition | BuildSys Conference | *November. 2021*
- Developed a novel implicit RL framework (published in AAAI), beating next-best solution (out of 24 teams) by **120%**.

5x Hackathon Winner | MLH | *September. 2019 - March. 2022*
- Won hackathons at MIT (best disaster relief hack), Duke University (best health hack), University of Washington (best technical hack), and Virginia Tech (most innovative hack).