Pratyusha Karnati

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EDUCATION

Georgia Institute of Technology Atlanta, GA

- *Masters of Computer Science in Computational Perception and Robotics | GPA: 4.0/4.0* Aug 2020 - May 2021
- *Bachelors in Computer Science and Engineering, Concentration: Intelligence, Devices | GPA: 3.65/4.0* Aug 2017 - May 2020
- **Coursework:** Deep Learning; Networking; Algorithms; Perception & Robotics; Prototyping Intelligent Appliances; Systems & Arch

EXPERIENCE

Healthcare Robotics Lab *(Graduate Student Researcher, Advisor: Charles Kemp, Zackory Erikson)* July 2020 - Present

- Improving a simulated assistive robotics environment by using reinforcement and transfer learning to improve policies for safety, accounting for noise, designing robust simulated agents for better training, and exploring efficiencies in using two robots for assistance

Perception and Robotics *(Graduate Teaching Assistant, Professor: Sonia Cheranova)* July 2020 - Present

- Hold weekly office hours, create lab work, and lead discussions to help students understand and implement core robotics concepts such as computer vision, visual SLAM, kinematics, factor graphs, path planning, localization, deep RL, etc.

Microsoft

Program Management Intern on Industry Acceleration Products for Education and Non-Profit May 2020 – Aug 2020

- Devised functional spec for HigherED scenarios of education accelerator using Dynamics 365 and Power Platform, generated marketing materials, developed partner steering team starter kit for PMs, pioneered design proposal to get the team more dedicated resources

Program Management Intern on Graphics for Core OS and Intelligent Edge May 2019 – Aug 2019

- Developed a sizing guidance for Windows Virtual Desktop customers with varying workloads to increase Azure's MAU, drafted a project plan, conducted competitive analysis, leveraged telemetry and ran performance tests, solidified alignment on product vision to drive clarity

Explore (SWE & PM) Intern on Windows NeXT May 2018 – Aug 2018

- Implemented a feature to mix and match 3D models by extracting textures from preselected textures, personal styles, or designs from other 3D models, designed MVP in Typescript and final feature product in Ember in Remix3D to increase Monthly Active Users

Contextual Computing Group/UbiComp Lab *(Undergraduate Student Researcher, Advisor: Thad Starner)* Jan 2018 – May 2019

- Developed passive haptic wearable technology to help patients improve their sensation and dexterity after injuries
- Spearheaded Head Worn Displays exhibit through the study of virtual reality properties and the social use of HWD

Spiralyze (*Summer Software Development Intern)* Jun 2017 – Aug 2017

- Executed A/B testing techniques to optimize revenue and traffic to company's website by designing new templates for the web pages

Technology Services Organization in GT CoC *(Technical Student Assistant)* Aug 2017 – May 2018

- Reviewed hardware and software issues to find a solution for students and faculty, addressed concerns through customer service skills

LEADERSHIP/ORGANIZATIONS

SpectroSam *(Co-Founder, Developer)* Aug 2017 - Present

- Building speech-language technology for children with hearing disabilities through a mobile edutainment game application
- Implementing frontend user interaction, coordinating curriculum development, leading project for app development, business, legal, etc.

Interdisciplinary Design Commons *(Peer Instructor, Volunteer)* Aug 2019 – Present

- Trained on IDC's equipment to create a comfortable, low-pressure learning environment to aid students accomplish their goals safely

HackGT *(Operations & Technology Team, Organizing Committee)* Dec 2017 – July 2019

- Organized event logistics for 1000+ member hackathons, developed tech for HackGT (i.e. curricula, apps, websites, NFC systems, etc.)

Math Tutoring Business *(Founder, Math Tutor)* May 2015 – Aug 2017

- Assisted elementary and middle schoolers in coursework, eliminated summer learning loss, and/or helped them get ahead of the curriculum

SELECTED PROJECTS

Mr. Tutor *(Freelance Developer and Designer)* Dec 2019 – Present

- Developing a software portal to help a small business tutoring service manage their accounts more effectively and increase returns

Skin Cancer Analysis *(Machine Learning Final Project)* Nov 2019

- Used various supervised learning classification methods to find the best method of skin cancer lesion detection, got an accuracy of ~95%

Kinesse *(Create-X Idea to Prototype)* Feb 2018 - May 2019

- Created a wearable chip that allows runners to listen to music and track their stats without having to bring their phone on runs

Bobot (MakeMIT 2019 Hackathon: Top 7 Finalists, Devpost: /g_karnati2004) March 2019

- Assisted in creating an automated boba machine that acts as a standalone salesman using Computer Vision to attract people towards it

Ovenbot (PerkinsHacks 2018 Hackathon: Challenge Award Winner) March 2018

- Designed a voice guided mobile application that allows the visually impaired to interact more efficiently with modern home appliances

More projects, information, and demos available at https://pratyushakarnati.me

SKILLS

Languages: Java, Python, C#, HTML/CSS, JavaScript, C++, Swift, Ember, TypeScript, SQL, VHDL, R
Tools/Platforms: Git, Pytorch, TensorFlow, Unity, Flask, Firebase, Android Studio, Xcode, Photoshop, Agile, AWS, Watson, Keras
Hardware: Arduino, Raspberry Pi, Printed Circuit Board (+EAGLE CAD), 3D Printing (+AutoCAD), Laser Cutting, Electronics Benchtop