

March 1, 2021

It is a pleasure to recommend Parvathi Meyyappan for the Carnegie Mellon Women's Association Annual Scholarship. Paru's demonstrated moral character, dedication to academic and extracurricular excellence, and commitment to the advancement of women in economics make her an exemplary candidate. Paru shows deep intellectual curiosity about the world around her, and a true desire to help her peers and community. She views Carnegie Mellon as a place where she can explore her multifaceted interests in equity-driven public policy, data analytics, and economic modeling, while positively impacting the experience of her peers.

My relationship with Paru began when she declared the B.S. in Economics and Statistics major during her first year on campus. I remember the difficulty Paru had in selecting a major since she was so deeply interested in so many different areas, including mathematics, computer science, and policy. From the beginning, it was clear that Paru had an enthusiasm for learning and genuine curiosity for solving problems she observed around her. I have grown to know Paru as a student, a leader, and a true contributor to the Carnegie Mellon campus. Paru's experiences and impacts at Carnegie Mellon are broad and indicate that she has truly embraced the interdisciplinary and multi-dimensional strengths of this institution. Paru has never been satisfied with just completing the minimum course requirements for her degree program. She has worked as a research assistant with Professor Ignacio Arana on a project where she has been able to combine her interest in politics and economics. During her senior year, Paru is completing a self-initiated honors thesis and taking advanced research courses.

Paru is the one of the top students in our program, but her impressive academic record should not overshadow the considerable contributions she has made to the campus community. Paru is the president and a founding member of Equilibrium: The Society for Women in Economics. Through this organization, she has had an essential role in connecting economics students in a space that supports and promotes gender equality and diversity in the profession of economics and in the business world. Paru has made a significant impact the campus community outside of the economics program. She is an NCAA National individual qualifier for the varsity cross country and track teams, a tutor for elementary students at Lincoln Elementary School, president of Chinmaya Yuva Kendra, a Hindu religion and Indian cultural club, and a teaching assistant for both the economics and statistics programs.

Paru has been a critical asset as a member of the Undergraduate Economics Program. Paru's passion for helping her fellow students combined with her wide range of experiences have made her the departmental go-to person. I've asked her to present her research, meet with prospective and current students, and to represent our program at campus and community events, and Paru has always answered these calls with a smile on her face and a true desire to give back in any way that she can. She has a genuine concern about the success of the economics program. Paru has served on numerous student advisory groups, event planning committees, and focus groups. We deeply value her reflective insights about her experiences as part of the economics programs, and her feedback is always mature, well-thought out, and actionable.

Paru is intellectually curious, open-minded, humble, and eager to use her academic studies to impact the world. She hopes to focus her future research work on equity and equality in

public policy. Paru is deeply connected to CMU in her academic departments, athletics, and student life, and her outgoing nature has contributed to meaningful relationships with her peers, faculty members, and staff. Faculty have repeatedly commented on her intelligence, curiosity, and positive demeanor in the classroom. Paru's journey and the ability she has demonstrated to successfully explore and navigate the numerous opportunities Carnegie Mellon University offers is noteworthy. Paru has spent a significant amount of time reflecting on her experiences at CMU, and she clearly credits the institution and community for her success.

Paru exemplifies maturity, commitment to academic excellence, and dedication to leaving Carnegie Mellon a better place than we she started here four years ago. She is a leader amongst her peers, and uses her strengths, academic knowledge, compassion for others, and own experiences overcoming challenges to guide her classmates. Paru has been a true asset to the department, and has made it a personal mission to help create programs and initiatives that satisfy the unmet needs of her peers. She is a true exemplar of the spirit of Carnegie Mellon.

Sincerely,



Kathleen Conway, EdD.  
Senior Academic Advisor and Program Manager, Undergraduate Economics Program  
Instructor, Economics Sophomore Colloquium



## **Paru Meyyappann's Reflection on Her Time at CMU**

As the president of Equilibrium, the Society for Women in Economics, I've worked with a number of women who are either economics majors or are interested in majoring in it. I've helped students stick with programs they're facing difficulty in but also helped students move around based on what their passions are and where those opportunities are at CMU. A few of Equilibrium's main goals are to create a strong inclusive female community for women who enjoy Econ and to further equality of women in the industry. These are things that I'm passionate about and a tight knit community I want to further cultivate.

These past 4 years I've competed and traveled with CMU women's cross country and track teams, becoming a leader and captain of the team. This has given me the opportunity to support my teammates through the difficult balance between extracurriculars and academics. This includes supporting their choices to prioritize academics when running was taking a ton of time in their schedule. I learned to become a better confidant and advisor to students outside my discipline, listening to what they're struggling with and being there for them to make changes that aren't always easy to make.

Further, I've had the opportunity to mold minds younger than CMU students. My freshman and sophomore year I tutored young underprivileged and marginalized students at Lincoln Elementary school in math and language arts. I was able to inspire young women to like math and tell them how "cool" it can be. I felt lucky to see the world through their eyes and show them how learning outside of the classroom is fun and something that they should pursue.

## **Faculty Letters of Support**

Paru took my elective class Emerging Market and my experiential learning project class. Throughout the year, we have been talking about research ideas and planning her path after Carnegie Mellon. Paru has been an extraordinary student easily earning an A in both classes. While I could speak at length about Paru's academic achievements and ability, I want to focus on the dimensions that are central for the ACS scholar program. I want to start from my observations of Paru within the classroom. This year I increased substantially the computational requirements for my elective by making the usage of the statistical software R a requirement. The downside for this change is that a fraction of students are at a relative disadvantage, having taken fewer classes learning this software. Here Paru has been instrumental in improving the classroom experience of her fellow students. She has been a to go person for me in asking her to help other students. Her positive and helpful attitude has also been key in the experiential learning class that I (together with three other faculty members) delivered this summer. This class, as the title points out, is not your ordinary class. Students enrolled were asked to work as peers in a new research project. The class had little lecturing, instead the faculty and the students (we referred to them as lab members) were involved in lengthy brainstorming sessions. Paru was instrumental in the success of the class. She was often taking initiative in leading the discussion and echoing fellow students ideas. As her previous class, she was again a helpful resource for any R-heavy task.

The commitment to fellow students and to the economics program goes beyond her work in the class. Paru has been active in numerous extracurricular activities. I want to point to an important one. Economics is particularly a male-dominated field. While the gender imbalance is

evident by looking at the faculty roster of any economic department, the problems are more severe. Already at an undergraduate level (let alone at a Ph.D. level) female student participation is low. Paru has been deeply involved in our Equilibrium Student Club. The goal of this club is to reverse this troubling trend by building a sense of community among female undergraduate students in economics. This year Paru is the president of the club.

Laurence Ales  
Associate Professor of Economics  
Director Undergraduate Research for Economics

My name is Gary M. Aldrich, and I am the Head Men's and Women's Track and Field Coach at Carnegie Mellon University. I am writing this letter of recommendation on behalf of Miss Paru Meyyappan. I have had the pleasure of knowing Paru for almost five years now as I recruited her during her senior year of high school, and have been her coach going on four years for her college career.

Paru is a tremendous example of what a Carnegie Mellon student-athlete is and should be. There was something about her the first time we meet, I knew she was special. I was right beyond my belief. She was talked about so highly by her High School Coach and one of her teammates from High School who is our Hammer School Record holder. She has done incredibly well in the classroom and from the time she stepped foot on campus she quickly made her mark in athletics, demonstrating a work ethic of the highest quality in all areas. Paru has gained valuable experience not only as an athlete but also as a teammate, student, and most importantly as a person. She works well with others and through this experience, she has developed and increased her knowledge in all aspects of her life. She is always on-time and present at practice. She develop her skills and knowledge to a level many hope to attain but are not willing to put forth the effort. The leadership, caring attitude and relationships she has with her teammates tell more of the story. I feel the main reason she has accomplished many of her goals in athletics, in the classroom, in life is because of her willingness to learn, accept criticism, and do all of the extras, which is a really valuable attribute to have whether it be as a student, an athlete, or a successful career!!

Paru became a tremendous leader in such a short period of time and asset for our program, mainly because of the image and habits she demonstrates. I only hope I have more athletes with Paru's qualities, character, and work ethic. Paru Meyyappan will be a valuable asset to any "TEAM" she is associated with.

Gary M. Aldrich  
Head Men's & Women's Track & Field Coach

I have had the opportunity to work with Paru during the past three years as her coach at Carnegie Mellon University, where she is an outstanding student and valuable member of our Cross Country and Track & Field teams. During that time, I have had the opportunity to interact with Paru on a daily basis, and believe that I can speak with accuracy as to the unique abilities and qualities which make Paru a most deserving recipient of your organization's recognition.

As you will see from her academic credentials, Paru Meyyappan is an excellent student with extremely demanding majors of Economics and Statistics in Carnegie Mellon's Dietrich College. Despite her demanding academic workload, Paru has been able to successfully balance both her academic demands and extracurricular activities to achieve success in all venues. Our sport is a year round pursuit, encompassing Cross Country in the fall, Indoor and Outdoor Track & Field in the winter and spring, as well as summer training for the fall season. It takes a tremendous amount of self-discipline, maturity, and great work ethic to succeed in running at the collegiate level, especially at such a demanding university.

Beyond her academic pursuits, Paru Meyyappan is one of the most engaging and goal oriented student-athletes with whom I have had the opportunity to work, and I have been coaching at the college level for over thirty-five years. She is that totally committed student-athlete who stops by the office every day, whether or not there is organized practice, to talk about her day, her academics, and just to make sure that she is doing all that she can to be at her very best. I look forward to our daily discussions and hope that they will resume soon when our students return to campus.

As a supportive teammate and team leader, Paru has no peer. Whether it is taking the team's laundry from the locker room to the equipment room on a daily basis, cleaning up following meets or team meals, or being the person who know the right thing to say to encourage her teammates prior to a hard workout or race, Paru has developed into a great leader who leads by example as often as with her words. Paru has been one of our top runners both in Cross Country and on the track during her first three years. Despite dealing with several injuries over the years, she has helped lead our Women's Cross Country team to three successive appearances at the NCAA Championship meet, as well as ever improving placings at the UAA Conference Indoor and Outdoor Track Championships meets. During this very difficult extended time away from campus and her teammates, Paru has been the team leader who has kept her teammates together, despite physically being apart, and focused on continuing to do all that they can to progress as runners.

Tim Connelly

Head Men's and Women's Cross Country and Associate Head Track & Field Coach

# Parvathi Meyyappan

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## Education

### CARNEGIE MELLON UNIVERSITY | MAY 2021

- BS Economics and Statistics, Dietrich College of Humanities and Tepper School of Business
- Relevant current and completed coursework includes: Statistical Inference, Linear Algebra, Probability Theory, Programming and Computer Science, Int. Micro and Macroeconomics, Advanced Econometrics, Real Analysis, Advanced Modern Regression, Special Topics in Epidemiology, and Data Mining
- Unweighted GPA: 3.65/4.0

### MONTA VISTA HIGH SCHOOL | 3.85/4.0 | MAY 2017

## Projects and Work Experiences

### MEASURING GENTRIFICATION IN TEXAS AND ITS EFFECTS ON PUBLIC SCHOOLS| AUG 2020 – PRESENT

- Dietrich Senior Research Thesis advised by Professor Zach Branson
- Working on several datasets from Zillow, Texas public schools, American Census Survey, National Housing Protection Database, USPS Vacancies, and the US bureau of Labor Statistics to measure the state of Gentrification in major Texas Cities that have experienced rapid growth in the past decade and analyze its effects on students in Texas public schools

### CREATING NEW ECONOMIC DATA FOR DECISION MAKING IN A POST COVID-19 WORLD| MAY – AUG 2020

- Worked with Professors Laurence Ales, Chris Telmer, Ariel Zetlin-Jones, and Rebecca Lessem-Mueller and other students to create a survey to measure changes in consumer behavior as a result of covid-19; deployed through amazon Turk
- Helped write grant proposal that received \$50,000 from RK Mellon Foundation

### NLP ANALYSIS OF CONGRESSIONAL RECORDS| DEC 2019 – MAY 2020

- Worked with historical congressional speech data transcribed by Stanford
- Used natural language processing methods and sentiment analysis to analyze changes in US congress' sentiment on China, Russia, and other nations over time and made a Rshiny app to help communicate results.

### DATA SCIENCE AND RESEARCH INTERN | 84.51 (KROGER) | MAY – AUG 2019

- Used R, SQL and Python's Jupyter Notebooks as well as internal applications to implement Causal Impact to study the difference in measurement as a result of stratifying the sample in order to see the effects of removing hot digital offers and replacing them with regular yellow tag offers.
- Worked with Ralphs and QFC customer data collected through the Kroger customer loyalty cards
- Interpreting, presenting and sharing results through a final oral presentation to entire company

### BACKTRACKING FUEL TYPE AND COMPOSITION ON CA WILDFIRES | AUG 2019 – DEC 2019

- Worked with data on chemical composition of smoke collected through Dr. Coty Jen's smoke spectrograph
- Used various different methods to reduce the dimensionality of data including PCA, local linear embedding and Sammon mapping. Worked with semi-labelled data as well as semi supervised and unsupervised modeling and clustering.

## Activities and Leadership

### STUDENT TUTOR | LINCOLN ELEMENTARY SCHOOL | JAN 2018 – FEB 2020

- Work one on one with 3<sup>rd</sup>-5<sup>th</sup> grade students with math and reading at a low-income school to provide extra help to students who don't have an academic support structure at home

### VARSIY COLLEGIATE ATHLETE | TEAM CAPTAIN | CROSS COUNTRY AND TRACK | AUG 2017 - PRESENT

- Compete year round on the travel team, UAA conference championship competitor, and NCAA Nationals individual qualifier

### PRESIDENT | EQUILIBRIUM: SOCIETY FOR WOMEN IN ECONOMICS | AUG 2019 - PRESENT

- Organize a strong community of women passionate about economics through mentorship and social event
- Recruit alumni and other women in economics to provide leadership to underclassmen in the club

### TEACHING ASSISTANT | INTERMEDIATE ECONOMICS AND REASONING WITH DATA | AUG 2020 - PRESENT

- Holding Office Hours, leading discussion sections, and helping students with their coursework. As well as writing Syllabi, Homework Assignments and Exams for students

## Honors and Awards

- Andrew Carnegie Society Scholar: Honors Leadership Society given to 2% of graduating class
- Omicron Delta Epsilon: Honors Economics Society
- Early Research award (2018) and Advanced Research award (2020) at CMU's Meeting of the Mind

## Skills

- R, Python, SQL (Postgre, Oracle, SQLite), Java, C++, HTML, Tableau
- Fluent Tamil, Conversational French