# Pranjal Vachaspati

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## PROFESSIONAL EXPERIENCE

**Ramp** June 2024-Present
*Staff Software Engineer* Boston, MA

- On the Engineering Platforms team, led projects to improve developer experience, API quality, and system stability
- Led development of Bill Pay international debiting capabilities

**Jane Street Capital** June 2023-April 2024
*Software Engineer* New York, NY

- Developed Terraform-like tools to manage and provision infrastructure at scale
- Reviewed and edited technical writing to improve documentation and communication firmwide

**Toast** Oct 2021 - May 2023
*Senior Software Engineer - API Platforms* Boston, MA

- Designed infrastructure to serve the needs of a rapidly growing fintech company using a Kotlin-based microservices architecture
- Developed API standards and tools to help developers write consistent and usable APIs
- Developed and taught internal technical writing courses for 100+ engineers

**Google** Sept 2019 - Sept 2021
*Software Engineer - Search Platforms* Cambridge, MA

- Developed encapsulation techniques to maintain the stability of a large, rapidly evolving, legacy Java/C++ hybrid codebase with thousands of developers serving billions of users
- Designed infrastructure for migrating large monolithic web-scale applications to distributed microservice architectures

**University of Illinois at Urbana-Champaign** Fall 2014-Sept 2019
*Research Assistant for Professor Tandy Warnow* Urbana, IL

- Designed and evaluated phylogenetic species tree estimation methods

**Freelance & Internships**

- Additional work experience with blockchain, embedded development, data science, high performance computing, etc.

## EDUCATION

**University of Illinois** Aug 2014 - Sept 2019
*PhD in Computer Science* Urbana, IL

**MIT** Graduated June 2014
*B.S. in Physics; coursework in Computer Science* Cambridge, MA

## ADDITIONAL EXPERIENCE

**Champaign County Board** Aug 2018-Nov 2019
*Elected board member* Champaign County, IL

- Member of 22-member elected board with over 200,000 constituents and $130 million budget

***Jeopardy!* Champion** 2016-2017
Culver City, CA

- Six-time champion and Tournament of Champions semi-finalist, with winnings of over $140,000

## SKILLS

**Languages**: Java, Kotlin, C++, C, OCaml, Python, Rust, SQL, Javascript, CSS, HTML, Go, Mathematica, MATLAB, Haskell, Lex, Yacc, LaTeX, English, Hindi

**Tools**: gRPC, REST, OpenAPI, DynamoDB, Kafka, Postgres, Guice, Dagger, Bazel, Gradle, Pandas, Jupyter, Git, Hg, Terraform, Linux/Bash, Emacs, vim

**See reverse for publications and awards**

## PUBLICATIONS

10. P. Vachaspati and T. Warnow. "SVDquest: Improving SVDquartets species tree estimation using exact optimization within a constrained search space". Molecular Phylogenetics and Evolution, 2018.
9. P. Vachaspati and T. Warnow. "Enhancing Searches for Optimal Trees Using SIESTA". RECOMB International Workshop on Comparative Genomics, 2017
8. S. Christensen, E. Molloy, P. Vachaspati, and T. Warnow. "Optimal Completion of Incomplete Gene Trees in Polynomial Time". 17th International Workshop on Algorithms for Bioinformatics (WABI) 2017.
7. B.M. Boyd, J.M. Allen, N.P. Nguyen, P. Vachaspati, Z.S. Quicksall, T. Warnow, L. Mugisha, K.P. Johnson, and D.L. Reed. "Primates, Lice, and Bacteria: Speciation and Genome Evoluition in the Symbionts of Hominid Lice". Molecular Biology and Evolution, 2017.
6. J.M. Allen, B. Boyd, N.P. Nguyen, P. Vachaspati, T. Warnow, D.I. Huang, P.G. Grady, K.C. Bell, Q.C. Cronk, L. Mugisha, and B.R. Pittendrigh. "Phylogenomics from Whole Genome Sequences Using aTRAM". Systematic biology, 2017. Vancouver
5. P. Vachaspati and T. Warnow. "FastRFS: Fast and accurate Robinson-Foulds Supertrees using constrained exact optimization", RECOMB-Comparative Genomics and Bioinformatics, 2016.
4. P. Vachaspati and T. Warnow. "ASTRID: Accurate Species TRees from Internode Distances", RECOMB-Comparative Genomics and BMC Genomics, 2015.
3. R. Davidson, P. Vachaspati, S. Mirarab, and T. Warnow. "Phylogenomic species tree estimation in the presence of incomplete lineage sorting and horizontal gene transfer", RECOMB-Comparative Genomics, and BMC Genomics, 2015.
2. P. Vachaspati, W. Detmold (2014). "Fast Evaluation of Multi-Hadron Correlation Functions". LATTICE 2014.
1. S. Li, P. Vachaspati, D. Sheng, N. Dural, M. V. Romalis. "Very large optical rotation generated by Rb vapor in a multi-pass cell". Phys. Rev. A 84, 061403(R) (2011)

## AWARDS AND RECOGNITION

**Graduate Research Fellow** 2016-2021
*National Science Foundation* Urbana, IL
**Ira and Debra Cohen Fellow** 2015-2016
*UIUC College of Engineering* Urbana, IL
**Saburo Muroga Fellow** 2015-2016
*UIUC College of Engineering* Urbana, IL
**Roy J. Carver Fellow** 2014-2015
*UIUC College of Engineering* Urbana, IL

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