

# ELLIOT G MITCHELL

New York, NY

646-932-0430 ◊ egm2143@cumc.columbia.edu

## EDUCATION

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<b>Columbia University</b> , New York, NY PhD Student, Biomedical Informatics	2016 - Present
<b>Columbia University</b> , New York, NY Master of Arts, Biomedical Informatics	2016 - 2018
<b>Carleton College</b> , Northfield MN Bachelor of Arts in Psychology (with Distinction) Concentration in Cognitive Science	2009 - 2013

## WORK EXPERIENCE

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<b>Columbia University</b> , New York, NY Graduate Research Assistant	2016 - Present
<b>Columbia Technology Ventures</b> , New York, NY Technology Ventures Fellow	2019 - Present
<b>Epic</b> , Madison, WI Technical Coordinator	2015 - 2016
<b>Epic</b> , Madison, WI Technical Services	2013 - 2016
<b>Bon Appetit at Carleton College</b> , Northfield, MN Student Manager, Food Services	2010 - 2013

## HONORS and AWARDS

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<b>Stage 1 Finalist</b> CMS AI Health Outcomes Challenge	2019 - 2020
<b>First Place</b> AMIA Student Design Challenge, with Lisa Grossman	2018
<b>First Place</b> AMIA Student Design Challenge, with Lisa Grossman	2017
<b>Third Place</b> HITLAB World Cup of Voice-Activated Technology in Diabetes	2017
<b>Top 5 Finalist</b> Alexa Diabetes Challenge	2017
<b>Phi Beta Kappa</b> Carleton College	2013
<b>Magna Cum Laude</b> Carleton College	2013
<b>Sigma Xi</b> Carleton College	2013
<b>Dean's List</b> Carleton College	2011 - 2013

## PUBLICATIONS

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- Mitchell EG**, Tabak E, Levine M, Mamykina L, Albers D. Enabling Personalized Decision Support with Patient-Generated Data and Attributable Components. *arXiv preprint*. arXiv:1911.09856 November 2019
- Desai PM, **Mitchell EG**, Hwang ML, Levine ME, Albers DJ, Mamykina L. Personal Health Oracle: Explorations of Personalized Predictions in Diabetes Self-Management. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. doi:10.1145/3290605.3300600
- Mitchell EG\***, Grossman LV\*, Hripcsak G, Weng C, Vawdrey DK. A method for harmonization of clinical abbreviation and acronym sense inventories. *Journal of biomedical informatics*. 2018 Dec 1;88:62-9.
- Grossman LV, Feiner SK, **Mitchell EG**, Creber RM. Leveraging Patient-Reported Outcomes Using Data Visualization. *Applied clinical informatics*. 2018 Jul;9(03):565-75. doi:10.1055/s-0038-1667041

\*co-first author

## PRESENTATIONS

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### CONFERENCE and WORKSHOP PRESENTATIONS

- Mitchell EG**, Burgermaster M, Heitkemper E, Levine M, Miao Y, Tabak E, Albers D, Smaldone A, and Mamykina L. Feasibility of a machine learning based method to generate personalized nutrition goals for diabetes self-management. *AMIA Annual Symposium*, November, 2019. Washington, DC.
- Grossman LV, **Mitchell EG**, Hripcsak G, Weng C, Vawdrey DK. A method for harmonization of clinical abbreviation and acronym sense inventories. *National Library of Medicine Informatics Training Conference*, June, 2019. Indianapolis, IN. **Best Presentation Award**
- Mitchell EG**, Burgermaster M, Heitkemper E, Levine M, Miao Y, Desai P, Hwang M, Tabak E, Albers D, Smaldone A, and Mamykina L. 2019. Personalized, data-driven recommendations for diabetes self-management with GlucoGoalie. *Workshop on Interactive Systems in Healthcare (WISH)* May, 2019. Glasgow, UK.
- Mitchell EG**, Burgermaster M, Heitkemper E, Reading M, Levine ME, Miao Y, Desai P, Mamykina L. An Intelligent Voice Assistant for Diabetes Self-Management: T2D2 Taming Type 2 Diabetes, Together. *AMIA Annual Symposium*, November, 2018. San Francisco, CA.
- Mitchell EG**, Burgermaster M, Heitkemper E, Mamykina L. Designing Conversational Interfaces for Diabetes Self-Management. *American Association of Diabetes Educators*, August, 2018. Baltimore, MD.
- Mitchell EG**, Opportunities for Conversational Voice Assistants in Chronic Disease Self-Management. *National Library of Medicine Informatics Training Conference*, June, 2018. Nashville, TN.

### CONFERENCE ABSTRACTS

- Mitchell E**, Maimone R, Mamykina L. Characterizing Human vs. Automated Coaching: Preliminary Results. *CHI EA 20: Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*. May 2020.
- Juul F, Mamykina L, Almonte A, Sepulveda J, Heitkemper E, **Mitchell EG**, Burgermaster M. User Experiences with Platano, a Dietary Self-Monitoring App for Underserved Patients with Type 2 Diabetes. *Journal of Nutrition Education and Behavior*. 2019 Jul 1;51(7):S44-5. doi:10.1016/j.jneb.2019.05.404

Burgermaster M, Juul F, **Mitchell E**, Heitkemper E, Sepulveda J, Almonte A, Mamykina L. Personal Informatics Technology for Engagement in Community Health (PI-TECH): Mixed Methods Study of Platano, a Motivationally Tailored App for Dietary Diabetes Management. *Current Developments in Nutrition*, Vol. 3, Issue Supplement.1, June 2019, nzz050. P1605119, doi:10.1093/cdn/nzz050.P16-051-19

## POSTERS

**Mitchell EG**, Mamykina L. T2Coach: A conversational agent health coach for diabetes self-management. *Data Science Day 2020: Virtual Preview*. March 2020.

**Mitchell EG**, Mamykina L. Towards automated conversational health coaching. *New York Academy of Sciences (NYAS) Natural Language, Dialog, and Speech (NDS) Symposium*, November 2019, New York, NY.

**Mitchell EG**, Levine M, Mamykina L, Tabak E, Albers D. Machine learning for personalized decision support with patient-generated health data. *AMIA Annual Symposium*, November 2019. Washington, DC.

**Mitchell EG**, Heitkemper E, Ensari I, Albers D, Smaldone A, Mamykina L. Data-Driven Personalization of Nutrition and Physical Activity Goals for Diabetes Self-Management. *Columbia Data Science Institute (DSI) Data Science Day*, 2019. New York, NY.

**Mitchell EG**, Levine ME, Miao Y, Burgermaster M, Hwang M, Heitkemper E, Smaldone A, Albers DJ, Mamykina L. Automated Generation of Personalized Nutrition Goals for Diabetes Self-Management with Platano. *Columbia Data Science Institute (DSI) Data Science Day*, 2018. New York, NY.

**Mitchell EG**, Levine ME, Albers DJ, Mamykina L. Reflecting on Diabetes Self-Management Logs with Simulated, Continuous Blood Glucose Curves: A Pilot Study. *AMIA Annual Symposium*, November 2017. Chicago, IL.

## CHALLENGES and COMPETITIONS

**Mitchell EG**, Grossman LV. A Multimodal Conversational Agent to Support Diabetes Self-Management. *AMIA Annual Symposium Student Design Challenge*, 2018 (**First place**)

Grossman LV, **Mitchell EG**. Visualizing the Patient-Reported Outcomes Measurement Information System (PROMIS) Measures for Clinicians and Patients. *AMIA Annual Symposium Student Design Challenge*, 2017 (**First place**)

**Mitchell EG**, Burgermaster M, Heitkemper E, Reading M, Levine ME, Miao Y, Desai P, Mamykina L. Presenting T2D2: Taming Type 2 Diabetes, Together. *Alexa Diabetes Challenge Demo Day*, 2017 (**Top 5 finalist**)

**Mitchell EG**, Burgermaster M, Heitkemper E, Reading M, Levine ME, Miao Y, Desai P, Mamykina L. Presenting T2D2: Taming Type 2 Diabetes, Together. *HITLAB World Cup Demo Day*, 2017 (**Third place**)

## INVITED TALKS

Personalizing Health Goals with Data Science. *Columbia Data Science Institute Health Analytics Center Workshop*, February 2020.

Voice Technology. *Society for Nutrition Education and Behavior (SNEB) Digital Tech for Nutrition Education Roundup*, April 2019.

## REVIEW ACTIVITY

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<i>American Medical Informatics Association (AMIA) Annual Symposium</i>	2017 - Present
<i>CHI: Late Breaking Work and Papers tracks</i>	2018 - Present
<i>Information Technology &amp; People</i>	2019 - Present

## SERVICE and MENTORSHIP

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<b>Mentor</b> , AMIA High School Scholars Program	2019
<b>Student Planning Committee</b> , NLM Informatics Training Conference, Indianapolis, IN SPC member for National Library of Medicine Informatics Training Conference	2019
<b>Assistant Editor</b> , MedInfo2019 Member of the MedInfo2019 Congress Proceedings Editorial Team	2019
<b>Student Representative</b> , Columbia University DBMI, New York, NY Elected by peers for two-year term	2018 - 2020
<b>Co-Teaching Volunteer</b> , TEALS, New York, NY Introduction to Computer Science at Inwood Academy for Leadership	2018 - 2019

## PROFESSIONAL MEMBERSHIPS

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<b>Association of Computing and Machinery, Special Interest Group on Human-Computer Interaction (SIGCHI)</b>	2018 - Present
<b>American Medical Informatics Association</b>	2016 - Present
<b>The New York Academy of Sciences</b>	2016 - Present

## TEACHING EXPERIENCE

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<b>Teaching Assistant</b> , Columbia University, New York, NY BINF G4008 - Intelligent Decision Support: History, Paradigms, and Applications	Fall 2019
<b>Workshop Organizer</b> , The Chapin School Senior Intern Week Program Workshop: Evaluating the impact of interactive prototypes and systems	June 2019
<b>Co-Teaching Volunteer</b> , TEALS, New York, NY Introduction to Computer Science at Inwood Academy for Leadership	2018 - 2019
<b>Teaching Assistant</b> , Columbia University, New York, NY BINF G6001 Research Methods	Spring 2019
<b>Teaching Assistant</b> , Columbia University, New York, NY BINF G4003 Symbolic Methods	Spring 2018
<b>Mentor</b> , Epic, Madison, WI	2014 - 2016