Dr. Deniz **Akdemir**

STATISTICAL GENOMICS AND GENOMIC ASSISTANT BREEDING

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Core Skills

- **Statistical Genomics:** Genomic selection, multi-trait methodologies, genomic prediction, GWAS, models for epistasis and genotype by environment interactions, optimization of plant and animal breeding programs.
- **Statistics:** Multivariate analysis, high-dimensional data modeling, Bayesian methods, machine learning, deep learning, data science, biostatistics.
- **Statistical Computation:** Proficient in R, SAS, Python and C++ for statistical programming and analysis.
- **Software Development:** Development of research and commercial grade software.
- **Management and administration:** Strategic planning, project management, team leadership, grant/patent writing, budgeting, accounting.
- **Languages:** English (fluent), Turkish (native).

Career Summary

- **Senior Clinical Data Scientist, National Marrow Donor Program, Minneapolis, USA (2023 - Current):** Engaged in statistical and machine learning analysis of stem cell transplant data, focusing on research into donor optimization. Applied for grants and submitted manuscripts to peer-reviewed journals. Wrote patent applications.

- **Clinical Data Scientist, National Marrow Donor Program, Minneapolis, USA (2021 - 2023):** Engaged in statistical and machine learning analysis of stem cell transplant data, focusing on research into donor optimization.

- **Postdoctoral Research Associate, School of Agriculture and Food Science, University College Dublin, Dublin, Ireland (2019 - 2021):** Conducted research on methods for combining heterogeneous genomic and phenotypic datasets and prepared statistical software for data analysis.

- **Statistical Consultant, Cornell Statistical Consulting Unit, Cornell University, Ithaca, NY, USA (2017 - 2019):** Provided statistical consulting services for researchers at Cornell University, including the preparation and presentation of statistics workshops.

- **Postdoctoral Research Associate, Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY, USA (2011 - 2017):** Focused on research developing new methodologies in genomic selection and prediction, mixed models, and machine learning, advising graduate students and preparing statistical software.

- **Visiting Assistant Professor, Department of Statistics and Actuarial Science, University of Central Florida, Orlando, FL, USA (2010 - 2011):** Responsibilities included teaching Data Mining Methodology, Theoretical Statistics, Applied Time Series Analysis, and Nonparametric Statistics.

- **Visiting Assistant Professor, Department of Mathematics and Statistics, Ohio Northern University, Ada, OH, USA (2009 - 2010):** Taught Statistics for Professionals, Statistics for Engineers, and Statistical Computing, catering to various undergraduate levels.

Workshops and Training Sessions

- **Genomic Assisted Breeding Workshops:** Conducted workshops in the USA, Ireland, Spain, and Belgium, educating the agricultural community on genomic technologies.
- **Public Speaking:** Presented at various international conferences including EFI conference in Geneva and ASHI Annual Meeting in San Antonio.

Publications

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Professional References

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- **Dr. Julio Isidro-Sanchez**
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  - **Relationship:** Expert in plant breeding and genetics, collaborator on various projects
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  - **Relationship:** Industry partner in genomic tool development, contributed to software enhancements
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