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Presentation Details

Session Title	S61 - Partnerships in Innovation
Presentation Title	MIMIC II: A Massive Temporal Database to Support Research in Integrating Data, Models, and Reasoning in Critical Care
Session Type	Partnerships in Innovation
Axis I Classification	I.B.5. Uncertain & temporal reasoning, & decision theory
Axis II Classification	II.3. Designing deployable resources & systems w/in biomed enterprises
Axis III Classification	III. C. Biomedical Research (basic & clinical research)
Topic Track Category	Applications of Informatics Track
Session Time	10/25/2005 10:30 AM - 12:00 PM
Site	Hilton Washington
Room	Lincoln West, Concourse Level
Presenters	Mohammed Saeed ; Brian Janz
Abstract Synopsis	The MIMIC-II(Multiparameter Intelligent Monitoring in Intensive Care) database was created through a partnership between industry and academia to support the development of advanced ICU patient monitoring systems that can substantially improve the efficiency, accuracy and timeliness of clinical decision making in intensive care. Previous efforts in developing physiologic and clinical databases have been limited by the selection of only a partial subset of all the data generated over a patient's stay. MIMIC-II is a far more comprehensive database that includes several continuous channels of high resolution physiologic waveforms such as ECG and blood pressures, vital signs, monitoring alarms, continuous therapeutic intervention profiles of each patient's stay, laboratory results, fluid balance, nursing progress notes and discharge summaries. MIMIC-II currently includes over 3500 ICU patient records from one hospital and we expect to commence collection at another hospital this year. Our research group is developing "gold-standard," UMLS-based annotations of clinically significant hemodynamic events in patient records using clinical expertise from a committee of clinicians. We are also developing automated methods of de-identifying records per HIPAA requirements. Once completed, the MIMIC-II database will be made available so that other investigators can leverage this powerful resource for their own innovative research projects.