Position: Self-Driving Car

Coach: Prof. Henrik Christensen (and team)

Asst. Coach: Michael “Misha” Novitzky

Stats: Built from a Porsche Cayenne, thinks with an entire 8-blade server rack in its trunk and sports aviation-grade inertial measurement unit (IMU) sensors

Hometown: Robotics & Intelligent Machines Center

Fun Fact: Loves to shuttle passengers around town (but can’t until it’s legal in Georgia for a car to drive itself on city streets)

To learn more: robotics.gatech.edu
Position: Explorer & Commander of Turtlebots

Coach: Prof. Henrik Christensen

Asst. Coach: Carlos Nieto

Stats: Built with an iRobot mobile base, explores and maps buildings without human assistance using a dual-core processor, Kinect camera and inertial measurement unit (IMU) sensors

Hometown: Cognitive Robotics Lab

Fun Fact: Successfully completed exploration and mapping missions with U.S. Army robots

To learn more: robotics.gatech.edu
In-Home Assistant
Position: In-Home Assistant

Coaches: Prof. Charlie Kemp & Prof. Wendy Rogers

Asst. Coaches: Hai Nguyen & Jenay Beer

Stats: GATSBII (GATech Service Bot with Interactive Intelligence), a PR2 robot that assists older adults by using its 28 degrees of freedom, 7 cameras, 1 Kinect camera and 2 laser rangefinders

Hometown: Georgia Tech Aware Home

Fun Fact: Finds hidden radio-frequency-tagged objects using antennas and software provided by the Healthcare Robotics Lab

To learn more: robotics.gatech.edu
Autonomously Adapting Acrobat

Georgia Tech
Position: Autonomously Adapting Acrobat

Coach: Prof. Jun Ueda

Asst. Coach: Jim Shealy

Stats: Built with 9.2 Kg-cm of torque per joint, totes an advanced MEMs 6-axis accelerometer, a high-current capable 2400mAh 6v NIMH battery pack, a 16MHz brain, and uses a high-speed wireless 2.4Ghz network to connect with computer mainframe

Hometown: Human Modeling and Bio-Robotics Laboratory

Fun Fact: Often seen mimicking human controllers’ gestures by using Kinect camera. Plans to jump free of his table to fulfill dream to be a “free runner.”

To learn more: robotics.gatech.edu
DARWIN-OP

Therapy Coach

Georgia Tech
Position: Therapy Coach

Coach: Prof. Ayanna Howard

Asst. Coaches: Hae Won Park, Sergio Garcia and LaVonda Brown

Stats: Functions as an interactive therapy coach to engage children with disabilities to achieve rehabilitation objectives, monitors child's play, and engages in collaborative-task interaction in a shared workspace.

Hometown: HumAns Lab

Fun Fact: Currently learning to play Angry Birds and enjoys helping children learn math

To learn more: robotics.gatech.edu
Position: Robotic Puppet

Coach: Prof. Magnus Egerstedt

Asst. Coach: Greg Droge

Stats: Designed by Atlanta Center for Puppetry Arts, provides a platform for researching control of complex systems, choreographic motion control and human-robot interactions

Hometown: Georgia Robotics and Intelligent Systems (GRITS) Lab

Fun Fact: 1/3 size model of Dr. Magnus Egerstedt, including an exact duplication of sweater vest

To learn more: robotics.gatech.edu
Environmental Underwater Monitor
Position: Environmental Underwater Monitor

Coaches: Prof. Mick West and Prof. Tom Collins

Asst. Coach: Michael “Misha” Novitzky

Stats: Works in a team of Yellowfins to search the water using forward-looking sonar and an underwater camera, searches for environmental features to execute simultaneous localization and mapping (SLAM) and communicates with its team using an acoustic modem underwater and a 900 Mhz radio on the surface

Hometown: GTRI Autonomous Systems Laboratory

Fun Fact: Loves to swim with people, but be careful: Don't touch its propeller!

To learn more: robotics.gatech.edu
Position: Home Service Robot & Companion

Coach: Prof. Andrea Thomaz

Asst. Coach: Crystal Chao

Stats: Using 37 degrees of freedom in total (a 13-dof head, a 2-dof torso, two 7-dof arms, and two 4-dof hands) communicates with humans using speech, gestures and eye gaze and learns concepts and motor skills from human demonstrations

Hometown: Socially Intelligent Machines Lab

Fun Fact: Survived several injuries, including multiple broken wrists and his torso controller board bursting into flames

To learn more: robotics.gatech.edu
Intelligent Musical Buddy
**Position:** Intelligent Musical Buddy

**Coach:** Prof. Gil Weinberg

**Asst. Coach:** Mason Bretan

**Stats:** Features machine learning, emotional intelligence, computer vision and natural language; detects beat and genre to dance with beat-synchronized and genre-specific movements

**Hometown:** Center for Music Technology/Robotic Musicianship Group

**Fun Fact:** Can find your favorite tunes by listening to you clap a beat or sing a song—or just by watching you dance

*To learn more: robotics.gatech.edu*
GOLEM KRANG

Whole-body Manipulator

Georgia Tech
GOLEM KRANG

Position: Whole-body Manipulator

Coach: Prof. Mike Stilman

Stats: Boasts dynamic stability, weighs in at 300 pounds, balances on wheels and maintains storage of energy/momentum

Hometown: Humanoid Robotics Lab

Fun Fact: Also known as the "MacGyverbot" due to its plans to use everyday objects as tools!

To learn more:
robotics.gatech.edu
GOLEM HUBO

Walking Humanoid and Mobile Manipulator

Georgia Tech
GOLEM HUBO

**Position:** Walking Humanoid and Mobile Manipulator

**Coach:** Prof. Mike Stilman

**Stats:** Weighs in at 100 pounds. Sports harmonic drives, dynamically stable ZMP walking and operates drills!

**Hometown:** Humanoid Robotics Lab

**Fun Fact:** Will compete in the DARPA Robotics Challenge, aiming to save human lives!
Marimba-Playing Robotic Musician
Position: Marimba-Playing Robotic Musician

Coach: Prof. Gil Weinberg

Asst. Coach: Mason Bretan

Stats: Features improvisation, style modeling, computer vision and machine musicianship

Hometown: Center for Music Technology/Robotic Musicianship Group

Fun Fact: Imitates jazz greats like John Coltrane and Thelonious Monk, and mixes and matches multiple artists to create new styles of improvisation and interaction

To learn more: robotics.gatech.edu
SCRIBBY

Programming Coach
Position: Programming Coach
Coach: Instructor Jay Summet
Stats: Features an HD camera, infrared obstacle sensors and a Bluetooth radio; decked out with dual wheel encoders, multi-phonic speaker, and a “red LED of doom”

Hometown: CS 1301: Introduction to Computing

Fun Fact: Students learning to program use more than 300 Scribblers each semester. Scribblers escape mazes, find colored targets and are often cast as the star in movies or plays produced by students.

To learn more: robotics.gatech.edu
DARCI

Assistive & Rehabilitative Robot

Georgia Tech
Position: Assistive & Rehabilitative Robot

Coaches: Prof. Lena Ting & Prof. Charlie Kemp

Asst. Coaches: Morris Huang & Tiffany Chen

Stats: DARCI (Dynamically Adapting Robot for Cooperative Interactions) features two Meka 7DOF SEA compliant arms, a Meka Prismatic Lift (Festo DGE-SP) and a Meka Omnibase with Holomni-powered casters, decked out with ATI force/torque sensors at wrists (Mini40-E)

Hometown: Neuromechanics Lab & Healthcare Robotics Lab

Fun Fact: Designed for close physical interactions with humans, DARCI performs cooperative motor interactions with people (such as partner dancing) in ways that are fun and improve motor skills. Hopes to dance the tango one day.

To learn more: robotics.gatech.edu