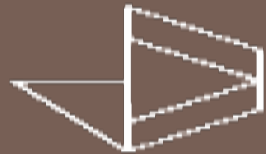


# Fuzzy Logic: AI PLAY IN ELECTRIC VEHICLES

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# About Me

- Video Game Engineer and Inventor
- One of the top living inventors
- Chief-Engineer and Co-founder Oculus VR
- Over 30 patents – 12 issued
- Key Developer and Inventor – Guitar Hero Video Game series
- Scrolling mouse inventor
- Innovator at UC Berkeley' Jacobs Institute for Design
- 30 Years experience in entertainment electronics

# My R&D Lab near Silicon Valley



# AI in Electric Vehicles

- Increasing complexity of mobility devices
- Tesla provided teething and innovation
- Broad use of AI potential particularly with autonomous features (SLAM) and vision system technology and propulsion control
- Much data management requiring large local storage and cloud based sharing of large amounts of datum

# Increasing Complexity of Mobility Devices

- Tesla acquires DeepScale (10/19/2019) Neural Net technology
- Managing large amounts of vehicle data will be challenging
- Requires constant contact with mobile networks and what to do when signal is lost this will require some planning and local data storage

# Areas of AI Potential in EVs

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- Propulsion and battery management
- Augmented driver comfort
- Autonomous driving (required for hailing features)

# Tesla Self Driving Sensor



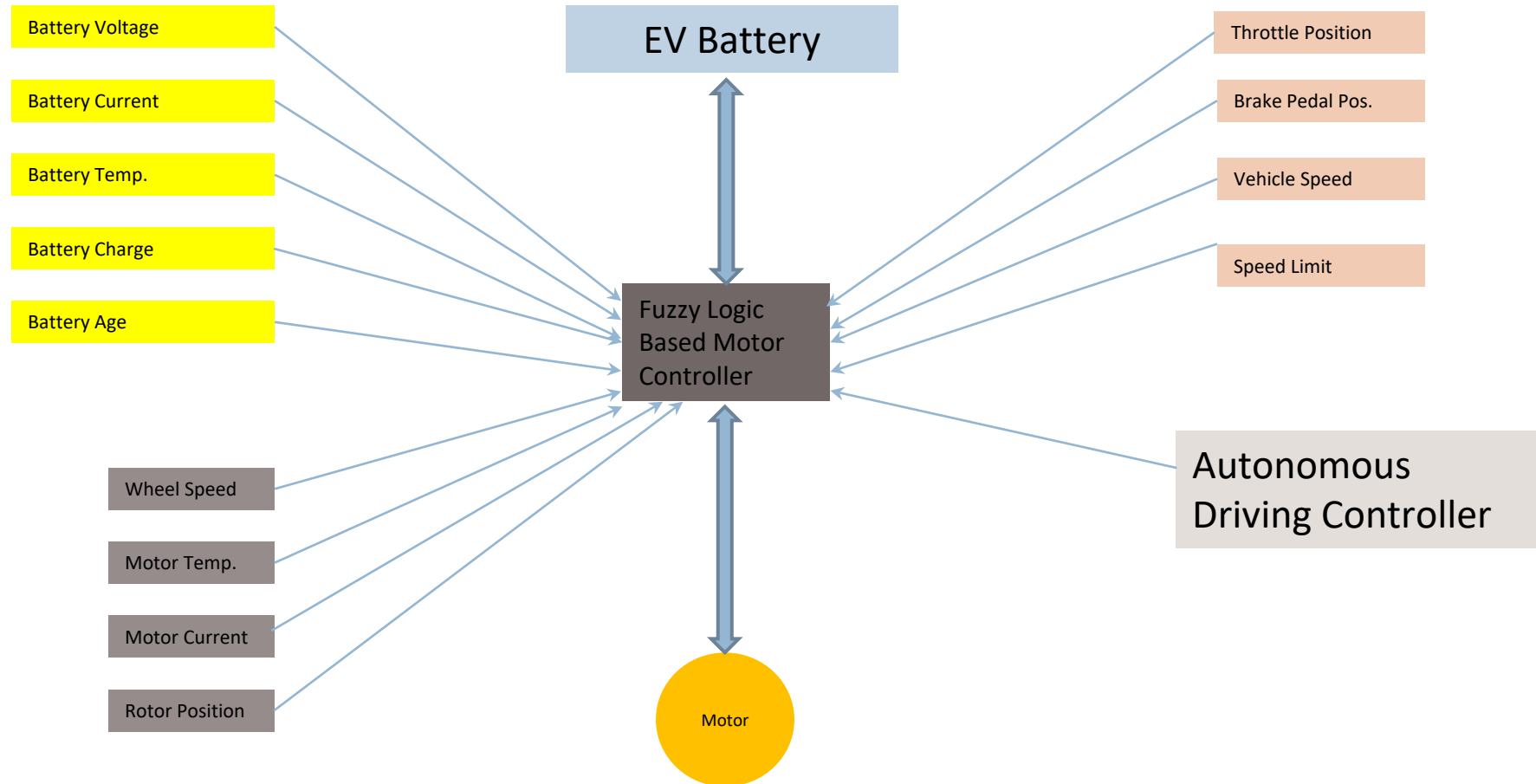
# Tesla Self Driving

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- Eight Cameras
- Side looking ultrasonic sensors
- Forward radar to 160 meters
- Claims Neural Net processor, possibly GPU
- Requires Training
- Adaptive



# EV Fuzzy Controller



# Fuzzy Logic EB

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- Finished for Lee Iacocca in 1993
- First use of LiON in vehicle



# Current R&D Project



THANK YOU! JACKJMCCAULEY@BERKELEY.EDU



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