knndebug

⊕ **knndebug**

- SerialUID: long
- width:integer
- height:integer
- circle:Ellipse2D
- circle1:Ellipse2D
- circle2:Ellipse2D
- cords:int[]
- circlecolor:Color
- circlecolor1:Color
- circlecolor2:Color

+ knndebug()

GUI

GUI

+ CamDataInstanz:CamData
+ Screensize:Dimension
+ counter:integer
+ row:integer
- frame:JFrame
- panel:JPanel

+ main(String[] args0):void
+ GUI()
- initialize():void

calib

⊕ **calib**

- SerialUID: long
- x:integer
- y:integer
- width:integer
- height:integer
- circle: Ellipse2D
- rand: Random
- circlecolor: Color

+ calib()
+ paint():void

Eyetracking

Eyetracking

- SerialUID: long
⊕ width:integer
- height:integer
- timer:Timer
+ coords:int[]
- circlecolor:Color

+ Eyetracking()
+ paint():void

CamData

CamData

+ knn0: KNearest
+ knn1: KNearest
+ caprun: Videocapture
+ eye0Samples: Mat[]
+ eye1Samples: Mat[]
+ xCoords: int[]
+ yCoords: int[]
- pCounter: int

+ CamData()
+ CamData(size: int)
+ getSize(): int
+ save(coords: int[]): boolean
+ saveRun(coords: int[]): boolean
- enlSize(): void
+ getX(ID: int): int
+ getY(ID: int): int
+ getEye0(ID: int): Mat
+ getEye1(ID: int): Mat
+ startRunning(): void
+ stopRunning(): void
+ getEyes(ID: int): Mat[]
+ getCoords(ID: int): Mat[]
+ getMat(): Mat
+ getFaceNow(): Mat
+ getFace(): Mat
+ getEyes(): Mat[]
+ getEyesImproved(): Mat[]

+ getEyesImprovedRun(): Mat[]

+ debugCamView(): void

+ debugFaceView(): void

+ debugFaceEyesView(): void

+ debugFaceEyesImprovedView(): void

+ debugFaceEyesImprovedViewRun(): void

+ debugMatFaceEyesImprovedView(): Mat

+ debugScaledOnlyEyesImprovedView(size: int): void

+ debugExistingEyes(): void

+ initializeKNearest(scale: int): boolean

+ initializeKNearest(): boolean

+ interP(ID1: int, ID2: int, ID3: int): int[]

+ interP2(ID1: int, ID2: int): int[]

+ getGuessRun(): int[]

+ getGuessRun(scale: int): int[]

+ combine2(coords1: int[], coords2: int[]): int[]

+ debugGuessFaceEyesImprovedViewRun(): void

+ getGuessMat(scale: int, image: Mat[]): int[]

+ getGuessKnn3(): int[]

+ getGuessKnn3(scale: int): int[]

+ checkForEyes(): boolean

+ getEyesImprovedRunWithCounter(): Mat[]

+ distance(ID1: int, ID2: int): int